TEXTILE BULLETIN

Vol. 54 May 26, 1938 No. 13

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TEXTILE BULLETIN

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Vol. 54 May 26, 1938 No. 13

South Carolina Weavers Meet at Spartanburg

THE Section on Weaving of the South Carolina Division of the Southern Textile Association held its Spring Meeting at the Franklin Hotel, Spartanburg, S. C., on Saturday, May 14th, with Smith Crow, Superintendent of the Drayton Mills, Spartanburg, presiding and leading the discussion.

About 175 men were present and took part in the discussion, which follows:

Chairman Crow: I want to say at the outset that I am indeed glad to see this large attendance. It is especially good for such a bad morning. Some of you, I know, have driven a long distance, and I appreciate your coming out.

We have to elect at this meeting a chairman of the Weavers' Section. As you know, Mr. Joe Lyons was elected general chairman of the South Carolina Division two weeks ago. I shall appoint a nominating committee now, and I ask that they get together sometime during the morning and decide upon whom they will recommend. On that committee I appoint Mr. M. B. Lancaster, of the Pacolet Manufacturing Co., Pacolet; Mr. George B. Moore, of the Whitney Manufacturing Co., Whitney, and Mr. Frank D. Lockman, of the Monarch Mills at Lockhart.

Our questions this morning are on slashing, cotton weaving, and rayon weaving. We shall first take up the subject of slashing, then proceed to cotton weaving, and then to rayon.

Squeeze Roll Blankets

Under the head of slashing, the first question reads: *"Some people take the blankets off their squeeze rolls and soak then in water over the week-end. Does this practice lengthen the life of the blankets and if so how much?"* I shall be glad if some of you who are working with slashers will give us your experience.

J. H. Franks, Weaver, Republic Cotton Mills, Great Falls: Mr. Crow, I have taken my blankets off, and it will help to a certain extent. I have never kept any record of the life of the blanket after doing that, but it will last a good deal longer. By taking them off and soaking them and putting them back on on Monday morning you get a more uniform warp than you do by leaving them on there, because it is a good little bit before that blanket gets wet back to the rolls, as it ought to be. When you take it out of the water and put it back on there you have the moisture and you get a better warp.

Chairmans Thank you, Mr. Franks. Has anyone else anything to say on this? Mr. McNeill, what has been your experience?

T. M. McNeill, Supt., Monarch Mills, Union: We do not take our blankets off and soak them. I have done it in years gone by, but in these latter days of hurry and bustle we don't have time to do it. I think it is helpful, however, to take them off over the week-ends.

Chairman: Do you think it adds to the life of the blankets to do it?

Mr. McNeill: Yes, sir.

Chairman Crow: Is there anything else on this? Is there any other question anyone would like to ask about the squeeze roll and the blankets?

Lease Strings On Broadcloths

If not, we go on to Question No. 2: *"Should lease strings be run up on every warp on a 128-sley broadcloth? If so, when should they be run, just before doffing or just after doffing?"*

Is anyone here running 128-sley broadcloth? No one, it seems. Is anyone running broadcloths of any construction? Just a few. Let's hear from some of you.

E. W. Ogburn, Overseer Weaving, Arcade Cotton Mills, Rock Hill: We don't run them up on every warp. I think it depends upon the kind of warp you are running. If you need them, it is fine to do it. But if you have good yarn and don't cut out the reeds, I don't think it is necessary to do it. When they are run I think they should be run just before every doff. That gives you no stuck ends and no tie-ins.

Chairman Crow: This gentleman from Rock Hill says he does not run up strings on every warp. Is that the best practice or is it not?

Starch-Base and Gelatine-Base Sizes

Question 3 reads: *"What has been your experience with starch-base sizes for rayons as compared with gelatine-base sizes?"* Some of us I know are running rayons. Have you had any experience with running both starch-base sizes and gelatine-base sizes?

(*Continued on Page 6*)

Applying Research Studies to the Textile Industry for Profit

Part I—Cotton Fiber Research

By Charles B. Ordway

THIS writer has often heard a well-worn saying, or parable, as some may call it. This saying has not been attributed to some ancient philosopher of Greece, nor did it originate from old Prince Ting-Ting of the Ding-dong dynasty. We might be safe in saying that it originated during one of those early pioneer days of rugged individualism. This saying was, "there is more in the man than there is in the land."

"Man" in this case might be classed as "research" and the failure to apply it in practical studies to help work out some of the textile industry's problems. "Land" illustrates the textile industry's ostrich-like faith in what they have done and are doing at present as the only course to follow.

Cotton fiber research has been studied from many avenues of approach and after many reports and years of investigation, it has been "boiled" down to certain points as being of real worthwhile importance for constructive investigation that can be applied to the textile industry for profit. These points are:

1. Methods for measuring the strength of raw cotton fibers.
2. Methods for determining the fineness of the raw cotton fiber.
3. Methods for determining the maturity and immaturity of raw cotton fibers.
4. Methods for determining the percentage of immaturity and maturity of raw cotton fibers.

The United States Department of Agriculture has had a specially organized section known as "The Cotton Utility and Standards Research Section." This group has pioneered in the study and development of methods for the evaluation of the most important character properties of raw cotton. This work has been carried out under the direction of Dr. R. W. Webb. The excellence and practicability of the work has aroused great interest among cotton growers, merchants, and the consuming industry (textile mills). It is making all parties connected with cotton "Fiber Research Conscious."

Cotton-fiber technologists and classers speak of "Character" properties of raw cotton as those inherent properties of the raw cotton fiber other than staple length. These are the properties that give the operative handling the cotton the "feel" as to fineness, silkiness, body (whether dead or springy), strength, uniformity, coarseness, etc., of the cotton under test. Definite and practical methods for the evaluation of the chief character properties of cotton fibers are becoming increasingly important as well as valuable to makers of tire cord, balloon cloth, parachute and aeroplane wing fabrics, mechanical and conveyor belting, fine dress goods, and many other hundreds of cotton products.

Methods for the measurement of the strength of raw cotton have been carried out from several angles. These are:

No. 1. The possible co-ordination of the cotton classer's idea of fiber strength and the "breaking strength" as obtained on the yarns made from this raw cotton.

No. 2. Testing the strength by single fiber breaking tests.

No. 3. Testing the strength by making break tests on a bundle of fibers.

Most cotton authorities agree that it is too difficult and elusive a problem to expect the cotton classer to predict with precision the possible strength of a cotton yarn and fabrics by merely feeling the raw cotton fibers in his hands before manufacture.[2] The classer might come quite close through careful observation and memory of various types of cotton but it is not always the case, so those in authority say.

Work on the methods for the testing of strength of raw cotton fibers by making single fiber break tests has been carried on by the Indian cotton authorities without satisfactory results suitable for practical application.[3] [4]

The single fiber test has been found to be too complicated and impractical due to the time element required.

Due to the impracticability of applying the single-fiber testing methods to commercial research, the development of the "bundle-break" methods has been carried forward with great thoroughness on the part of the investigators.[1]

Butterworth[1] bundle-break method was to take the raw-cotton fibers, comb out and straighten, weigh out 1 Mg, place in twist counter and give several turns, then place in jaws of single strand yarn tester for break test.[1] The objection to this method would be that it would require fibers of the same length to obtain comparable results.

Walen[5] conceived the idea of gluing together a given number of "pulled" out fibers after all fibers shorter than ⅞-inch were removed. The glued sample was then conditioned for necessary period at standard humidification and break test made in testing machine. The objections to this method might be listed as: first, it is not a true sample of the raw cotton under test; second, the gluing of the fibers would not be uniform and different tautness would exist; and third, the clamping of the raw fibers would tend to cut or injure those fibers adjoining the jaw of the tensile testing machine, thus tending to give faulty results.

Chandler[1] [6] worked out the "wrapped" bundle method. In this method, he made a bundle of combed fibers, then wrapped them with a thread under a definite tension whereby uniform results could be obtained on making the break tests when the wrapped bundle was placed in the jaws of the tensile testing machine. The strength test is made by placing the wrapped bundle in specially designed jaws attached to a standard motor driven yarn-skein. This method expresses the breaking strength of the cotton fibers in terms of the strength per unit of cross-sectional area. The investigator working on the single fiber strength testing methods failed to consider this important point.

The present improved Chandler method takes into consideration the careful integration of fiber cross-sectional areas and fiber strength. This permits study as to fineness of the cotton fibers under test since this is an important character property that bears thorough investigation by all textile manufacturers. This improved method can now be carried out so that an experienced operative can predict with a fair degree of precision what yarns of a certain number will give on breaking strength when prepared from raw cotton under similar ideal manufacturing conditions. By careful study this precision method of predicting strength may be extended to cover goods of all types, under manufacture in a plant.

The procedure of the improved Chandler method is as follows:[1]

1. Sampling ten or more tufts of raw cotton under test (the finished or wrapped bundle should have an average circumference of 0.125 inch).
2. Combing of tufts to be straight and parallel (these prepared tufts are conditioned at standard—65 relative humidity for two hours (before being wrapped).
3. Bundle of fibers is wrapped by special wrapping device using thread.
4. Wrapped bundle is entered into special jaws. These are attached to standard yarn-skein motor driven tester.
5. Recording of results, ten of one sample. Calculations made from data recorded.

The fineness of raw cotton fibers has been studied by work on these methods.

1. Microscopic measurements of fiber diameters on longitudinal and cross-section fiber samples.
2. Weighing of a given number of fibers of stated length—this is known as "the weight per unit of length of cotton fiber" method.

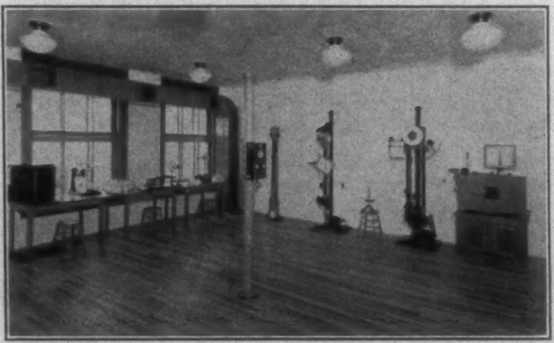
The first method has many variations that have been carried on through microscopic study. These are very exacting as to technical skill in manipulating the microscope and accessory equipment. The results obtained cannot be taken as a representative "mean" unit of measurement for both the longitudinal and cross-sectional diameter, or width of fiber, as some express it. Any "mean" measurement obtained could not be taken as a true representative of both the short and long fibers in a raw cotton sample. These microscopic test methods require the cutting of the fibers to obtain samples. This naturally distorts the fiber and would tend to give errors on micrometric measurements made. These methods are quite time-consuming and study shows they are not adaptable at present for commercial research work.

The second method of study appears to possess the best possibilities for practical application. This method can be made on groups of whole fibers with the length of the groups already precisely determined on a Suter-Webb cotton sorter or some similar piece of equipment.

The procedure recommended for this method is as follows:[1]

1. Sampling of cotton fibers (Suter-Webb cotton sorter).
2. Sorting in groups of 100 fibers per group length.
3. Weighing groups of 100 fibers (Torsion-Balance).
4. Recording data and calculations.

Fineness of fibers is of increasing importance from the spinning viewpoint and practically every test method will show that fiber fineness varies from raw cotton to cotton and from fiber to fiber in the same lot. From a practical standpoint, it appears that by systematic sampling and weighing that this method could be made of practical value for the spinner.



The methods for determining the maturity and immaturity of raw cotton fibers is limited to these two outstanding methods.

1. Chemical tests made on groups of prepared fibers. These fibers then studied under microscope and

(Continued on Page 16)

South Carolina Weavers Meet At Spartanburg

(*Continued from Page 3*)

R. E. Brasil, Overseer, Silk and Rayon, Republic Cotton Mills, No. 3, Great Falls: We have run both starch-base and gelatine-base size and find both of them very satisfactory, although in running pure gelatine we find that if the slasher stops and stands for any length of time it usually makes a mark across the warp. With the starch base it does not do that.

Slasher Ends Down On Rayon

Chairman Crow: Let's go on to Question No. 4: "*When an end comes down on a rayon set at the slasher, do you piece the broken end at the slasher, or do you let the weaver cross an end from the selvage to take the place of the broken end?*"

Mr. Brasil, what is the general practice along that line? Do you piece up ends when they break at the slasher?

Mr. Brasil: No, sir, we do not. I have done that in the past, however, and it was very satisfactory. We do not do it at our plant. I try not to have any more ends down on the slasher than can possibly be avoided and, on the other hand, try to avoid crossing ends in the weave room, which is very bad practice. If we do have to cross them, we cross them only a very few inches.

Chairman: Until the loose end comes up?

Mr. Brasil: Yes, sir.

Chairman: Thank you. Is there anything else on that? I think Mr. Brasil is correct when he says we want to run just as few cross ends as possible at the looms.

Slasher Blankets

Our next question reads: "*In running 80-square print cloth, how many yards of slasher blanket should be used, and what weight squeeze rolls should be used? How many yards and what weight rolls should be used for 136-sley broadcloth?*"

That is a question on which several who are here should be able to give us some information. Let's take up the first part of it. In running 80-square print cloth, how many yards of slasher blanket should be used? Mr. Moore, what do you say about that?

Geo. B. Moore, Supt., Whitney Mfg. Co., Whitney: Mr. Chairman, right at the present time we are not running 80-squares. We did run some a long time ago. We used a heavy squeeze roll and used about seven or eight yards of blanket, I think—as well as I remember.

V. W. Brannon, Overseer Weaving, Republic Cotton Mills, Great Falls: We use a 4½-yard blanket. We have a 600-pound roll in front and a 300-pound roll in the back.

A. C. Hudgens, Overseer Weaving, Chesnee Mill, Chesnee: I run a great deal of 80-squares and at present have four looms on it. I find we get better results with a 6-yard blanket. We run a 425-yard roll on the front roll and 300-pound roll on the back.

G. G. Simmons, Asst. Supt., Drayton Mills, Spartanburg: We run about an 8-yard blanket and use double size box. We have a 575-pound roll on the front and a 400-pound roll on the back.

Chairman: That ends our list of questions on slashing. Is there anything else on this subject that anyone would like to bring up?

Frank D. Lockman, Supt., Monarch Mills, Lockhart: I should like to know how many mills are using the thread-wound roll on the slasher.

Chairman Crow: Instead of the blanket on the slasher, do any of you use the thread-wound roll? There does not seem to be anyone here who is using it, Mr. Lockman.

Mr. Lockman: I must be by myself, then.

Chairman: Tell us something about it, if you are using them. It is interesting.

Mr. Lockman: I don't know much about it, but we have been using thread-wound rolls for six or seven years, and we feel that we get better results with them than we ever got with the blanket.

Chairman: What do you find is the cost of the thread-wound rolls as compared with the blanket?

Mr. Lockman: About 40 per cent of the blanket rolls.

Chairman: That is certainly interesting. I expect you will have a lot of us checking into that pretty quickly.

Mr. Simmons: How often do you have to rewind that roll, Mr. Lockhart?

Mr. Lockhart: You have to cut the yarn off about every three years. You start with a small roll, and you wind a little every week on the roll, and about every three years you have to cut off all the yarn and start a new foundation.

Flats On High Sley Broadcloth

Chairman Crow: If there are no other questions on slashing we will take up cotton weaving. The first question on that is: "*In running high-sley broadcloth, sometimes a warp end will break and attach itself to an adjoining end and weave into the cloth, causing a flat. What can we do to overcome this trouble?*" That does not necessarily mean high-count broadcloth. I know some of you are running combed broadcloth and some broadcloths of not as high count. We shall be glad to hear from you.

Mr. Franks: We run more lease strings in the warp at the slasher. Broadcloth of any construction should be leased three times; I mean when you start it, run it about half full, lease it then, and then when you doff it lease it again. You will have three leases, and you will not have any stuck ends. I have doffed mine and asked the slasher man if he had any stuck ends, and he would say no. I would go and run the lease strings myself and find probably anywhere from nine to fifteen ends out of the lease. Those ends will catch up and run on in, and the slasher man will never know it.

Chairman: Do you leave the lease strings in when you run them at the slasher?

Mr. Franks: No, sir, pull them out.

Mr. Simmons: From the way that question is stated, maybe Mr. Franks got the wrong impression. Frequently a warp end will break and, instead of snapping back and letting the drop wire down and stopping off the loom, this broken end will attach itself and stick to and wrap around the end next to it and weave right on through, causing a four-end flat. That is what we had in mind in asking that question—what can we do to overcome that type of flat. You see, if you have a four-harness broadcloth the first and third harness are down, and the second and fourth are up. A thread will break on the second harness, say, and will attach itself to the end next to it, which is on the fourth harness, skipping the third harness. It will weave through, and you have a four-end flat. It looks exactly like a flat that the weaver draws. I should like to get some information on that.

Mr. Lockman: Mr. Chairman, I really think that is a thing that you should take up with the man that furnishes you your sizing compound, because I think you can eliminate about ninety-five per cent of that with the chemicals in your sizing compound.

Chairman Crow: Mr. Franks, have you anything to offer on that?

Mr. Franks: No, sir, I have not. I have had some trouble with that once in a while; and a lot of times, due to the humidity, when an end breaks it sticks to another one and causes the trouble the gentleman spoke of. There is something on the yarn, more than likely, that drags that end in there or causes it to go in there.

W. P. Turner, Second Hand, Mayfair Cotton Mills, Arcadia: The chances are that end is already attached to the end adjoining it, before it breaks.

Chairman: And then weaves on in?

Mr. Turner: Yes, sir.

Chairman: Do you mean by the answer you have given that perhaps the end was stuck at the slasher?

Mr. Turner: As Mr. Franks mentioned, the humidity, and, as Mr. Lockman mentioned, the size will cause a gumminess there, and there will be a tendency for it to ride up—mat up. After a while it gets so it can not slide, and then is when the end breaks. It can not carry on.

Bobbins Turning In Battery

Chairman Crow: Do you have anything else to say on that? If not, we will take up Question No. 2: *"Do you know of any way to prevent bobbins from turning in in a Draper loom battery? We have a great many broken picks on the change caused by this trouble."* I think what is meant is, do you have trouble with the bobbins turning in the battery due to the vibration of the loom, causing it to break on bobbin change? Is there anyone here that can give us light on this? Are you having trouble with your bobbins turning in the battery, or have you had them do that in the past? If so, what did you do to correct it?

(*Continued on Page 10*)

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Carding and Spinning Discussed At Meeting Of Eastern Carolina Mill Men

THE Eastern Carolina Division of the Southern Textile Association held its regular Spring Meeting in Raleigh, N. C., on Saturday, May 21, 1938, in the lecture hall of the State College Textile School, beginning at 10 o'clock a. m. In the absence of the Chairman, Mr. J. V. McCombs, Pilot Mills Co., Raleigh, Mr. J. L. James, Superintendent No. 1 Plant, The Erwin Cotton Mills Co., West Durham, presided.

The invocation was said by Dr. D. F. Lanier, Superintendent Oxford Cotton Mills, Oxford, and a report of the proceedings of the meeting follows:

Chairman James: I am glad to see such a large crowd here today and I am very sorry that Mr. McCombs is sick and unable to be present.

At this time we shall hear from Professor Hilton.

Prof. J. T. Hilton, Textile School, N. C. State College, Raleigh: Mr. Chairman and Members, the Textile School faculty wish to welcome you this morning and hope you will have a very beneficial meeting. We are always glad to do all we can for any member of the Southern Textile Association.

Chairman: Thank you, Mr. Hilton.

We should like to have a word now from Mr. Harden.

M. R. Harden, Supt., No. 4 Mill, Erwin Cotton Mills Co., Durham: We are very glad to come here today, Mr. Chairman; I am sure I can say that for all of us. I should like to acknowledge the welcome we have received from Mr. Hilton. To many of us who were at the Textile School here, this is a chance to come back home again. Probably the students who drop in this morning may get something from our discussions, and we can perhaps get something from their experience. We feel that we are out on the battle line and that they are in the textile school doing some fundamental research work for us.

I hope that we are going to have a very good meeting here today and that everyone will take part in it.

Chairman James: Have you any announcements before we begin, Mr. Royal?

B. Ellis Royal, Secretary of the Southern Textile Association, announced that the annual meeting of the Association will be held at Blowing Rock, N. C., June 17th and 18th, Mayview Manor to be headquarters. He also asked everyone present to register.

Chairman: We will now proceed with the discussion. The first question reads: *"How long should bleached raw-stock cotton be aged, and what is the best method for ageing?"* I believe that question was assigned to Mr. McElhannon.

J. C. Pirkle, Supt., Durham Cotton Mfg. Co., Durham: Mr. McElhannon asked me to take the subject.

Bleached raw-stock cotton should be aged at least 48 hours and longer if possible and convenient to do so, depending upon the facilities the mill has for ageing cotton. When cotton is bleached and dried it loses a certain percentage of its natural oils and moisture content and is left in a weaker condition, and it should be allowed to age under proper humidity in a loose state.

The best method is to have the cotton opened or left loose, then blown into large bins, or large trucks, with perforated or lathed sides, so that the air and moisture may circulate throughout the stock, allowing it to regain its natural moisture content.

Chairman: Mr, Pirkle, do you thing if you had proper opening and cleaning equipment the length of time or the ageing would be as important as it is now, with the present equipment?

Mr, Pirkle: Mr. President, if we had the proper equipment we could clean it better, and we would probably have time to age the stock if we had the proper humidity. We consider our plant to be doing about three-fourths bleaching. What I mean by that is that we do not have 100 per cent bleaching. Some mills have more bleaching than others. I still think cotton should be allowed to age for a while and regain proper moisture content before it goes into the card.

Chairman: You do not think, do you, that with the proper cleaning equipment, and if you could put it through there and let it take up the moisture regain, ageing would be so important? What do you think about that, Mr. Miley?

W. H. Miley, Jr., Erwin Cotton Mills Co., No. 2, Erwin: I have never had any experience with bleached raw stock except with one sample that we ran, and as I remember that ran very badly. I think no matter what cleaning equipment you have it would be advisable to age that cotton. Just how much I do not know.

Mr. Harden: Mr. Chairman, we have aged bleached cotton in a way that might be a little more practical than opening it and putting it in slatted bins, as Mr. Pirkle mentioned. Quite often, when we do a large batch of bleaching, we put the cotton in loose bales to go in the storage house. If you do that, then, after you get it on the floor, if you have space enough remove all the ties except one and loosen the bagging, then turn it over, and that will loosen up the cotton. Let it lie there, and it will help it a lot.

Chairman: Do you think if you had the proper equipment it would still be necessary to age this bleached raw stock?

Mr. Harden: I do.

Virgil E. McDowell, Overseer Carding, No. 2 Mill, Roanoke Rapids: I want to ask if the dyehouse is not one of the main factors in bleaching cotton—that is, if it is not the most important factor?

Mr. Pirkle: Of course, the dyehouse is a very important factor. If the stock is dried too much in coming through the driers it will still lack moisture content. Of course, as the gentleman intimated a minute ago, it is expensive in some cases with bleached stock to have to handle it in trucks. Some of the mills I know of have large ageing bins—as large as this room. The cotton goes in one bin today and in the next bin tomorrow, and that takes a lot of space. It can be loosened up, as the gentleman said, but I am still partial to having moisture in bleached stock.

Mr. Royal: May I read a letter from Mr. McCombs, Mr. Chairman?

Chairman James: Yes, sir.

Mr. Royal read the following letter:

"Raleigh, N. C., May 21, 1938.

"Mr. B. Ellis Royal, Secretary,
"Care Eastern Carolina Division,
"Southern Textile Association.

"Dear Sir:

"Please extend to the committee and the members my regrets at not being able to meet with you, due to illness. I wish to thank you all for the fine co-operation given me, and my sincerest and best wishes go to my successor to make our Division one among the best in the Association.

"Sincerely yours,

"J. V. McCombs, *Chairman*."

Chairman James: We appreciate that letter.

Going back to this question on bleached raw stock, I have not had any experience on bleached raw stock. Do you think it would help you any if you had hoppers to feed it into? Do you think better opening equipment than you have would improve the running of this raw stock?

Mr. Miley: As I said, I haven't had any experience with it. We run the oil spray. It occurs to me it might be possible to run that with bleached cotton, and it might help.

Mr. James: You think it might run better with the addition of oil?

Mr. Miley: Yes, sir.

Chairman James: Has anybody had any experience with the use of oil in running bleached raw stock?

Mr. Hilton: A few years ago we had some dyed raw stock to run. We tried spinning it with oil and spinning without. I could not see much difference either way. I believe the dyehouse was to blame for most of our troubles. In bleaching or dyeing the natural oils or greases on the outside of the cotton have been dissolved, and if there is no way to put them back the fibre naturally is going to be wiry and dry. Usually in the last process they use a sulphonating oil, at the last wash or rinse.

Mr. McDowell: The reason I brought that question up is what the gentleman just spoke of—that the dyehouse plays an important part. If the dyehouse uses the proper chemicals and the proper care it is necessary to age bleached cotton only about 24 hours—just long enough for it to recondition itself. I have also run oil on bleached cotton, and if you do that properly it is not necessary to leave it in a loose condition. You can bale it up, and after 24 hours it will run well. That is my experience with local bleached cotton. I have gotten it from a dyehouse when it was impossible to run it, but the dyehouse worked on it and was able to use the proper chemicals in bleaching it. As the gentleman said, if they run oil in the last wash you are able to run bleached cotton all right.

Mr. Pirkle: I should like to ask Mr. McDowell what is the proper chemical to use and in what proportions?

Mr. McDowell: I am unable to answer that question, because I am not a dyer. There are several different chemicals you can use in bleaching, as I understand it. I am unable to give you the correct information on that, but you can find it out from some good dyer.

Cleaning Equipment To Eliminate Double Carding

Chairman James: Is there a dyer in the house who can give us that information?

If there is no more discussion on this question we will pass on to the next one, No. 2: *"For cleanness, evenness, and breaking strength, is it possible to put in cleaning equipment sufficient to give the same quality on ordinary carded work that can be had by double carding? If so, what equipment would you use?"*

I believe Mr. McDowell had that question.

Mr. McDowell: Mr. Chairman, I find that this can be accomplished in nearly every respect except for the removal of neps, and I think most of us double-card chiefly for the removal of neps. We depend mostly upon the card flats to remove short fibres and neps, and so it is with this fact in mind that we make arrangements to run the cotton through the operations twice. I think that when a mill has a very elaborate opening and picking room arrangement of machinery you will not find them doing much double carding, unless they are using a very low-grade staple and the neps are already in the cotton. Carding the cotton one time, with slow production, will generally do the work. But when you find a mill with only a few cleaning machines and a one-process picker you will find double carding necessary, because too much work is put upon the card, and we go ahead and double-card without giving the opening room much thought about helping our condition. Generally, when we double-card, we run the cotton back through all opening and picking machines, which should not be done.

I should be glad to answer any questions about these remarks, but the point I have tried to explain there is that with an elaborate opening and cleaning equipment and not doing too much work, so as to injure the fibres, you can prepare your stock in a mighty good condition by just coming on through with it and slow-carding it one time. The other point I brought out there is that the reason most of us double-card is that most of us have

(*Continued on Page 17*)

South Carolina Weavers Meet At Spartanburg

(*Continued from Page 7*)

Mr. Lockman: Is there anybody here from Draper? I understand they have a spring to work on the butt end of that bobbin in the battery to stop that.

Chairman: I am not sure whether there is anyone here that can tell us about that or not. Mr. Child?

W. K. Child, Draper Corporation, Spartanburg: We have been trying that now for about thirty days, and it has worked out very successfully so far. I don't know how it will finally work out, but preliminary tests look very good.

Chairman: Mr. Hill, you have had a long, wide, and varied experience. Will you tell us your experience along that line?

E. A. Hill, Supt., Clinton Cotton Mills, Clinton: We have had some trouble, but it has not been very serious.

Everett Taylor, Loom Fixer, Whitney Mfg. Co., Whitney: We had that trouble some years ago, with the bottom bobbin only, turning before it came down into the change position, turning and breaking the filling in the battery. The first thing we discvered on that was that we were using a disk there that had the opening for the base of the bobbin that was considerably larger than the bobbin we were using at that time. Changing the disk and putting in one with the proper opening did a great deal to eliminate it. Later we used an eccentric pin on the battery, which did a great deal to eliminate the trouble.

O. E. Bishop, Overseer Weaving, Inman Mills, Inman: I think if the disk is tight enough, if there is enough tension on it and enough tension on the bobbin, and if the transfer spring is tight enough, it will be all right. That is purely a loom-fixing proposition.

Floating End On Broadcloth

Chairman: Are there any other questions in this connection? If not, we will go on to No. 3: *"Sometimes an end of a broadcloth warp will float on the back side of the cloth for about an inch, then will weave in correctly for four or five yards berore floating again. What causes this?"* Mr. Simmons, can you tell us something on that?

Mr. Simmons: The first thing to look at is the position of the harness straps and the harness setting, and get that right. Of course, if gout is coming through it will make the end next to it ride and sort of skip. This end that will float for about an inch on the back and then run four or five yards, and then float again, must be coming off the bottom a little bit faster, probably because it is a little bit larger than the rest of the ends. That end is slack, for some reason, and does not get up in time for the shuttle to get over.

I should like Mr. Laurens to give us his views on that.

J. I. Laurens, Overseer Weaving, Drayton Mills, Spartanburg: On some occasions I have seen it doing that, and I have found that the harness is a little low, and the warp will be slack. Then when it pulls over on the other shed the harness will not pull hard enough, and therefore the end will float for about an inch.

Uniform Width On Marquisettes

Chairman Crow: Anything else on that?

Before I read Question No. 4 I am going to ask whether anyone here is running marquisettes or has had any experience in running them, whether you are running them now or not. (Pause.) It seems no one has had experience with them. The question is as follows: *"Do you have any trouble in maintaining a uniform width on marquisettes?"*

We all know that marquisettes have quite a bit of contraction, and the man that sent in this question would like to know if anyone has trouble maintaining a uniform width.

Mr. Lockman: Mr. Chairman, I have always had trouble with all kinds of cloth as to the width, keeping a uniform width. Lots of times it is on account of your spinning frames not being all of the same twist. That is one answer.

Chairman: You are having reference to widths in general, regardless of the type of weave, in your statement? Have you ever run any marquisettes?

Mr. Lockman: No.

Chairman: That is more difficult than anything else I have come up against.

Mr. Lockman: I have had more than an inch difference in width in four yards, on account of twist, in plain goods.

Chairman: What do you mean by twist?

Mr. Lockman: Some frames would have a different twist, and that cloth would be more than an inch wider than when filling from a different frame hit it.

Mr. Moore: That came from trying to get too many ends out of it, I expect. (Laughter.)

Filling Jerk Backs

Ccairman Crow: We will take up the next Question, which is No. 5. *"What is the best method of overcoming filling jerk-backs in plain cloths on Draper looms without feelers?"* Mr. McNeill, do you run any looms without feelers?

Mr. McNeill: Yes,sir.

Chairman: Do you have any trouble with jerk-backs?

Mr. McNeill: Yes, sir.

Chairman: Have you found any good way or method of overcoming that trouble?

Mr. McNeill: I am not a weaver, but my overseer of weaving is here—W. B. Williams. He might volunteer some advice.

Chairman: We shall be glad to hear from you, Mr. Williams.

W. B. Williams, Overseer Weaving, Monarch Mills, Union: The best thing I know is to see that you have a good thread cutter. See that the shuttle boxes are smooth —not worn, and that they are level. Be sure that the picker is smooth. See that the picker stick is cut off smooth and that there are no splinters under the picker. Then, of course, you want to take care of the power on your loom.

(*Continued on Page 12*)

Georgia Mill Heads Hold Successful Meeting

THE Cotton Manufacturers' Association of Georgia held a successful and interesting annual meeting at Sea Island, Ga., May 19th and 20th. A large percentage of the top executives of Georgia textile mills were in attendance.

Fuller E. Callaway, Jr., president of the Callaway Mills, was elected president of the Association, succeeding Paul K. McKenney, president of the Swift Manufacturing Company at Columbus, Ga.

R. H. Freeman, president of the Newnan Cotton Mills, Newnan, Ga., was elevated from treasurer to vice-president. Robert O. Arnold, vice-president of the Covington Mills, Covington, Ga., was elected treasurer.

Four new directors were named. I. S. Milner, executive vice-president of the Gate City Cotton Mills at East Point; S. W. Thornton, vice-president of the Hartwell Mills; H. Gordon Smith, general manager of the U. S. Rubber Products Company at Hogansville, and G. I. Parmenter, manager of the Goodyear Clearwater Mills at Cartersville.

George P. Swift, vice-president of the Muscogee Manufacturing Company at Columbus, was continued as a director, filling the term of Arnold.

Mr. McKenney, in his address as president of the Associaton, said in part: "This country developed as it did, not because people were willing to let their lives be planned but because they were independent, self-reliant, willing to take a chance, and to work hard if by so doing they might achieve success for themselves. They felt if they could make a profit, they were entitled to it and the hope of that out-weighed the fear of failure. They realized that soft jobs make soft people."

Commenting on the policies of the present Administration, he said: ". . . . . Most of us have quit trying to plan. Additions and improvements to buildings and equipment are postponed until we can have more confidence in the future.

"With a one-sided National Labor Relations Act in force, and with a Board even more partisan to enforce it, what inducement is there to invest money in buildings and equipment? Capital is timid and will go into hiding and stay there until it feels safe to venture out. It will not go into new buildings or new equipment or new industry as long as there is a feeling that the ownership of the plants is subject to the mercy of any organization that may take them over and remain in possession with no regard for the rights of the owners or the inconvenience caused the public and with no fear of punishment or even reprimand from those supposed to see that property as well as human rights are protected."

Claude Joiner, of the Standard-Coosa-Thatcher Company, Rossville, Ga., and chairman of the Cotton Buyers' Division of the Association, said in his report: "For the first time in many years the mills of Georgia have been forced to buy ⅞-inch cotton from Western sections of the belt. There is some difference of opinion as to the reason for this situation. According to government figures there is still enough ⅞-inch cotton produced in the State of Georgia, and but for the government loan program this cotton would have been available at a basis that Georgia mills who need this description cotton would have filled their requirements profitably. . . . . . The past crop shows over-production of the better staples, especially 1-inch staple, resulting in reduced premium and a shortage of ⅞-inch and 15/16-inch staple. . . . . The fact should be recognized that it is better for all concerned to have to buy the shorter cotton out of the State than to import the better staples."

The manufacturers heard a forecast by Governor E. D. Rivers that "freight rate discrimination (against the South) finally will be eliminated."

"Congressman Ramspeck (Democrat, Georgia) has a bill designed to accomplish this purpose," the Governor said. "No greater service could be rendered Georgia than by passage of the Ramspeck bill or some similar measure to the same end."

Governor Rivers said unrestricted importation of foreign goods and freight differentials were "artificial economic barriers" that retarded establishment of prosperity in the South.

Advocating quota limitations by the Tariff Commission, the Governor said he found it "hard to understand" why the government had neglected to protect cotton farmers from East Indian jute.

John C. Call, counsel for the National Association of Manufacturers, in criticising the Wagner Act, said that "balancing the Wegner Act is as important as balancing the budget. Something is seriously wrong when, despite complete control of local employment relations by the Federal Government, the country witnesses over 4,500 industrial disputes in one year. Industry lives in the shadow of the strike, the boycott, and the imported picket line. It takes no astrologist to see why under such conditions employment lags, new investment ceases, expansion is delayed. For with the so-called 'new technique' of the sit-down, the 'quickie' strike, the 'union dues' strike, and the flying squadron, not only is business faced with possible loss of earnings but the original investment in plant and equipment is in constant danger of destruction.

"The one-sided character of the Act, the doubts surrounding its administration, and above all, the fact that industrial discord has increased since the Act went into effect, require a Congressional re-examination, and corrective legislation which will balance the Act and its administration so as to protect the rights of employees, employers, and the public."

South Carolina Weavers Meet At Spartanburg

(*Continued from Page* 10)

Mr. Lockman: We do not use any feelers at all. Mr. Williams has covered quite a bit of the territory. Now, a shuttle with a spring high or low, to the left or to the right, is one of the most serious things we have to contend with in causing jerk-backs; and a loose shuttle is another bad thing. Mighty few of us keep those in good shape. The filling fork going too far through the grate is a very serious thing, too, in causing broken or jerked-back filling.

R. E. Dill, Night Weaver, Camperdown Co., Inc., Greenville: I have run Draper looms and ginghams, too, and it is more so on ginghams. I should like to hear from somebody who has run the gingham loom (that is the magazine loom), as to what causes jerk-back from the magazine end. All of us have them. We have to work on them continually. We have jerk-backs from both ends. On the Draper looms, of course, we have feelers, and we have some jerk-backs there, even though we have feelers. We use a long quill can, which is better than the short one. In the short quill can it has a tendency to jerk the end of the shuttle. The end is still in the shuttle eye. If the quill goes on through it gives you a single jerk-back after it has gone in the quill can; the end off the quill that is transferred will come back in the shuttle and drag it in on the box. On the magazine loom, too, it will do the same thing; and that is one thing that causes more of our jerk-backs than anything else, I think.

W. E. Tarrant, Asst. Professor of Weaving and Designing, Clemson College: Underneath the loom you have a little plate, underneath the lay side, that guides the bobbin into the can. It has been suggested that if you use a different plate there the bobbin will drop quicker into the can and thereby jerk all the thread out of the shuttle, if you do not use a feeler. I have had experience with that in different mills, particularly mills in Opelika, Ala.

Chairman: You use a plate there?

Mr. Tarrant: Yes, sir. It lets the bobbin drop quicker, thereby jerking all the yarn out.

Mr. Turner: As to the question the gentleman back there (Mr. Dill) brought up, I have found that where we have those jerked ends of that nature the temple knives are timed too late to cut those ends so as to jerk it out. The temple knife needs to be timed a little earlier, so as to cut the end before it drops into the can.

Chairman Crow: You are speaking of the Draper loom?

Mr. Turner: Draper loom, yes, sir.

Chairman: Can anyone give Mr. Dill any help on his question about jerk-backs on the gingham loom? Is there anybody here who has gingham looms? It seems not.

We will go on to Question No. 6: *"What is the best speed for 80 square on 40-inch E Model Draper looms?"* Is there any discussion on that? Is anybody here using those looms? There seem to be no answers to that question.

Advantages of Denman Picker

The next question, No. 7, reads: *"Does the Denman picker have any advantages over the leather picker?"* I understand that quite a number of mills have been running and some still are running the Denman picker. We have run some and are still running some. I should like to have an expression from some of you of your opinion as to this Denman picker.

H. B. Childers, Overseer Weaving, Arkwright Mills, Spartanburg: We are using the Denman picker and have been using it for about two years. We find we get better service out of the picker and longer life.

Referring to the jerk-backs, about which some of the gentlemen were speaking a moment ago, we find that we have fewer jerk-backs where we use the Denman picker. With the leather picker, the way it loops around back there and fuzzes up, lots of times we find it hangs the filling back up and causes a broken end where we do not have it with the Denman picker.

Ray Swetenburg, Supt., Ware Shoals Mfg. Co., Ware Shoals: With reference to the last gentleman's remarks, I want to say that we find our picker cost is about fifty per cent of what it was with the leather picker. At first we did not have very satisfactory results with it, because we did not get the right-sized loop; but since we have standardized the size of our sticks, the top of them, and have a loop that fits it exactly, we get fine results.

Mr. Bishop: Is the shuttle bill any higher?

Chairman: Is the cost of the shuttles any higher, Mr Swetenburg?

Mr. Swetenburg: No, sir. I might say that before this we did not have a very good shuttle cost with our leather pickers, but it has not increased any on account of the Denman picker.

Chairman Crow: The cost has not increased any?

Mr. Swetenburg: No, sir. At first we used an all-rubber picker, and we had trouble with it because of loosening the knerls in the shuttle. But the Denman picker, as you know, has fabric in there, which does not loosen the knerl.

J. H. Burgess, Asst. Supt., Woodside Cotton Mills Co., Fountain Inn: I have had quite a bit of experience on Denman pickers for several years. Denman pickers, of course, are like all other products; they have been improved in the last several years. The first Denman pickers I used did not give much service, but they have been improved. I think the Denman picker has its advantages and also its disadvantages. On the high-speed loom I think the Denman picker is preferable to the leather picker. Under some conditions, through, the Denman picker is not as suitable as the leather. Take a lot of mills that change the size of the shuttles and have not changed anything except the lay-in plate; that throws the point of the shuttle off center from the picker. The leather picker will give and is more suitable for a condition like that than the Denman, which is rigid and does not give as much. But I will say right here that the Denman people are making a picker with the hole off center just slightly, which will take the place of the leather picker and will fit the position of the shuttle point.

Mr. Lockman: We have been on Denman pickers about three years, and we find that the life of the Denman picker is nine months. That is on 1600 looms, with a speed of 170 picks a minute. As the Ware Shoals man over there said, the cost is about forty per cent—or fifty per cent, I believe he said—of the leather pickers.

Mr. Mayfield, Firestone Mill, Gastonia, N. C.: We have been running the Denman picker on a big loom—64-inch loom. Our picker cost is about twenty-five per cent that of the leather picker. Of course, this is a big loom, and heavy goods.

Mr. Lockman: We don't want to get this Denman picker price up, though. (Laughter.)

Chairman: No, we want to watch that.

Mr. Burgess: Has anyone used this new picker they have put out for use when you change your shuttles? The latest picker, with the hole already bored but not bored in the center; it is bored off center.

J. D. Sharp, Weaving, Addison Plant, The Kendall Co., Edgefield: I am using that off-set picker now, and it is giving good service. In other words, I saved thirty-one shuttles last year over the year before.

Mr. Lockman: We have been using that over-size shuttle for six years on 116 looms, but so far we have not gone to any special boring of the picker.

F. E. Shirley, Overseer, Belton Mills, Belton: We have been using this picker for some time. My fixers did not like it at all, because it takes a little more effort to parallel one, but after you do that it is a very good picker. One trouble we had was with this hole's not being countersunk, and we had to bore that out. If you do countersink that, it is a really good picker. Countersinking that keeps the screw head from sticking out.

Chairman: Is there any further discussion on the Denman picker?

If there is nothing else on this particular subject, we will take up some additional subjects that were handed in this morning. The first one is: "What is called a good standard of stops per loom per hour on 64 x 60? On 68 x 72?" We will call that question No. 8. George, what about it?

Mr. Moore: Offhand I don't recall, Mr. Crow.

Chairman: Mr. Lockman?

Mr. Lockman: Mr. Chairman, 0.4 per loom per hour of stops is good.

Chairman: On what count?

Mr. Lockman: 64 x 60 or 68 x 72. The ideal would be 0.27, and about 0.32 on 68 x 72. I think that would be ideal.

J. L. Adams, Overseer Weaving, Whitney Mfg. Co., Whitney: I think that standard of Mr. Lockman's is pretty good. I don't know whether any of us can get that, or not. I have found that it runs a little higher than his standard.

Mr. Lockman: Mr. Chairman, Mr. McNeill has an awfully well running print mill.

Chairman: Mr. McNeill, let's hear from you.

(*Continued on Page 25*)

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Personal News

L. F. Bledsoe is now overseer of the cloth room at the Langdale plant of the West Point Manufacturing Company, succeeding J. E. Caldwell, resigned.

V. D. Snyder, formerly overseer weaving, Drayton Mill, Drayton, S. C., is now overseer weaving, Victor Plant, Victor-Monaghan Mills, Greer, S. C.

E. B. Laurens, formerly overseer weaving, Beaumont Manufacturing Company, Spartanburg, S. C., is now overseer weaving, Drayton Mill, Drayton, S. C.

M. F. Springfield, formerly second hand in weaving, Drayton Mills, Drayton, S. C., is now overseer weaving, Kershaw Plant, Springs Cotton Mills, Kershaw, S. C.

J. E. Caldwell has resigned as cloth room overseer of the Langdale (Ala.) plant of the West Point Manufacturing Company, after 35 years as a cloth room overseer, 30 of which were at the Langdale plant.

Miss Tatum Named As State Sponsor

Miss Virginia Tatum, of Raleigh, N. C., senior at Woman's College, and daughter of C. S. Tatum, manager of the Pilot Cotton Mills, has been chosen by Gov. Clyde R. Hoey as the North Carolina sponsor for the annual Rhododendron Festival at Asheville, June 12th-19th.

With sponsors from ten other Southern States, Ohio, Illinois and Cuba, Miss Tatum will be presented at the Court of Rhododendron at an elaborate coronation ball to honor the king and queen of the festval.

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Furman Abernethy Joins Pittsburgh Plate Glass Co.

Pittsburgh Plate Glass Company has announced the appointment of Furman Abernethy, of their Newark, New Jersey, factory, as special representative in their specialized textile painting service. Mr. Abernethy will make his home in Charlotte, where he was for several years connected with the Grasselli Chemical Department of the DuPont Company. He is a native of Spartanburg, South Carolina, and was educated at Carlisle Military Institute and Columbia University.

Two Brothers Drown in Mill Reservoir

Kings Mountain, N. C.—N. J. Furtick, 20, and his 17-year-old brother, Cecil, sons of a Kings Mountain textile worker, drowned in the Bonnie Mill reservoir here May 20th.

Chief of Police J. A. Burns said the older youth waded into the reservoir to scare some ducks away, and stepped into water over his head. Cecil went to help him, and in the struggle that ensued, both went down.

OBITUARY

JOHN JORDAN

John Jordan, for the past eight years overseer carding and spinning, Hermitage Mill, Camden, S. C., died at his home in Camden, April 28th, after a brief illness.

Mr. Jordan was at one time superintendent of the Jefferson Cotton Mills, Jefferson, Ga., and had held other responsible positions. He was 67 years old, devoted to his family and friends, and was a member of the Baptist Church and active in Sunday School and all Church work.

COMING TEXTILE EVENTS

MAY 28

Piedmont Section of Southern Textile Association Meeting in Charlotte, N. C., Chamber of Commerce, 9:45 A. M.

JUNE 4

N. C. Master Mechanics' Division of the Southern Textile Association to meet at White Oak Division of Cone Memorial Y. M. C. A., Greensboro, N. C., at 9:45 A. M.

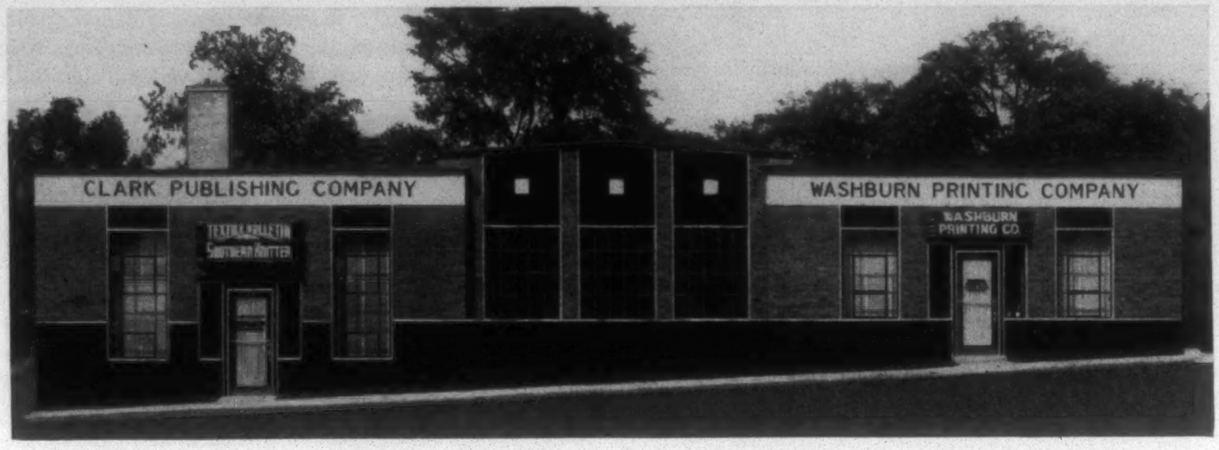
JUNE 16-17-18

Southern Textile Association Annual Meeting at Mayview Manor, Blowing Rock, N. C.

JUNE 24-25

Textile Chemists and Colorists, Piedmont Division, Summer Outing, Ocean Forest Hotel, Myrtle Beach, S. C.

NEW HOME OF CLARK PUBLICATIONS



Above is a front view of the new building now occupied by Clark Publishing Company and its affiliate, The Washburn Printing Company. The latter concern, in addition to printing TEXTILE BULLETIN, SOUTHERN KNITTER and other Clark publications, also does a large commercial printing business, including the job work of many Southern textile mills.

The building is located on West Morehead Street, at the gateway to the "textile highway" leading to Gastonia, Spartanburg, Greenville and other centers. It extends almost back to the next street and contains approximately 10,000 square feet of floor space. The front of the building, on which black glass predominates, has attracted much favorable comment. The signs over the doors are two-colored Neon.

J. E. Sirrine & Co., of Greenville, S. C., were the architects. Martin E. Boyer, of Charlotte, was associated with them and designed the front.

Clark Publishing Company and Washburn Printing Company will be hosts to their friends at a formal opening of their new home on the evening of Friday, May 27th, between the hours of 4:00 and 8:00.

Twenty-four States Testing Cotton Roads

Highway safety and efficient road maintenance will continue to be a single heavy problem as long as each American averages some 2,000 miles yearly of highway travel, as in 1937; "more and more it is recognized that only a smooth road is either a safe or an economical road," declared Charles K. Everett, manager of the New Uses Section of the Cotton-Textile Institute.

The United States Bureau of Public Roads made a unique contribution to public safety and economy, as well as to the cotton industry, in initiating the controlled nation-wide test of the "cotton road," now entering its third year, Mr. Everett asserts. "In more than twenty States, more than 500 miles of bituminous road, reinforced with cotton fabric, have been laid for observation under every kind of soil and weather condition. While these tests still have considerable time to run before engineers will call them conclusive, they are being watched with sharp interest by highway departments everywhere and initial unofficial reports indicate that they will markedly reduce some of the most destructive causes of road failure," said Mr. Everett.

The dirt-base bituminous road, conventional secondary highway in this country, is a splendid engineering structure until water attacks the sub-surface and leaves the bituminous mat without solid support, declared the Institute official. But when that happens the surface mat cracks and breaks, the edges ravel away, and the road quickly becomes too narrow and uneven for safe travel. It is this raveling, said Mr. Everett, which the cotton reinforcement is expected to remedy generally, as it has in earlier test locations.

The U. S. Bureau of Public Roads, in a recent publication, pointed out that "cotton roads are not, as might be supposed, actually built of cotton but are bituminous roads built in the usual manner in all respects except that they contain a single layer of loosely-woven cotton fabric." In more detail, Mr. Everett explained, when the sub-surface has been prepared in the usual manner, it is given a prime coat of bituminous material; then the cotton fabric is laid down and given an impregnating coat of asphalt or tar, immediately after which the surface coating of gravel, crushed stone or slag is applied and rolled, ready for use. The result is a tough, flexible, bituminous mat of great resistance to surface wear, squeezing and flattening out under traffic.

A mile of roadway uses the equivalent of eight to ten bales of cotton. The potential market for this cotton "life preserver" for roads is of course immense, comprising not only the 45,000 miles of bituminous road which has to be resurfaced each year but the 2,000,000 miles of unimproved dirt road which the States are now surfacing at the rate of about 30,000 miles a year. "Should the extended tests meet the expectations of our engineering advisers," said Mr. Everett, "cotton roads may turn out to be that fundamental and far-reaching use of an agricultural product in industry sought for so long by industrial pioneers like Ford and Firestone. Certainly there could be no better time than the present to vigorously prosecute the tests, with great road-building programs under way and the greatest cotton crop in all history to draw upon."

Applying Research Studies to the Textile Industry for Profit

(*Continued from Page 5*)

counts made as percentage of immaturity and maturity in a group.

2. Microscopic study of raw cotton fibers under polarized light will give qualitative and quantitative ratings of the fibers.

The simplest chemical method utilizes caustic soda in treatment of the cotton fibers. This method is Clegg's and was the first to utilize the mercerization idea on the raw fibers.[7]

The Department of Agriculture's investigators have simplified this method and it can be carried out rapidly by the folowing procedure.

Microscopic readings are made at 400 magnifications.

1. Sampling (preparation of 100 fibers of given length.
2. Fibers placed on 2 x 3-inch glass slide. Fiber covered with glass slip and immersed or flooded with 18 per cent caustic soda (NaOH) solution.
3. Slide immediately replaced on mechanical stage of microscope and focused. Mercerization takes place immediately, so readings are taken promptly without delay.
4. Recording made as to appearance of treated fibers, whether "thin-wall," "thick-wall," or "rod-like." The percentages of immaturity and maturity of fibers is read directly.

Cotton fibers are double refracting optically and the outer (primary) and inner (secondary) walls differ structurally. These structural conditions of cotton fibers will show color variations under polarized light examination. These color differences are taken as the basis for determining the immaturity and maturity of the raw cotton fibers.[8]

The application of polarized light on the study of cotton fiber maturity has been carried to its present place of value through the investigations of Pattee, Stevens, Schwartz, and Hotte.[8 9 10]

The apparatus necessary for this determination consists of a microscope with rotating stage, a polarizing cap analyzer, and a selenite. Some workers prefer the petrographic type of microscope as the analyzer is in the body-tube instead of on top. Magnification of 100 diameters is preferred as it is not too tiring on the worker's eye. An incandescent lamp with special "daylight" diffusing glass can furnish a satisfactory light source for examination.

A condensed technique of the methods is as follows: [8 9 10]

1. Fifty to one hundred cotton fibers are sorted and laid parallel on slide. The fibers are mounted between two glass slides without use of mounting mediums and the glass slides are held together with a transparent tape.
2. The slide is mounted on stage of microscope and it is focused with the necessary polarizing accessories being used. Upon rotation of 90°, the strong and fully matured fibers appear yellow to yellowish-green in color and do not change their color throughout the rotation. The partially immature to weak or wholly immature fibers will show color variations during this rotation ranging from light and indigo blues to orange and yellow colorations.
3. A rating system based on the color changes can be used to calculate the percentage of immaturity and maturity present in the cotton fibers under test.

Pattee[8] has found from mill practice that those cottons possessing the highly matured fibers according to this polarized light rating give the best carding and spinning results. The finished yarns and fabrics from these cottons were freer from neps which is of considerable value in the dyeing and finishing of the goods. He also observed that fabrics made from highly matured cotton fibers possessed a greater resistance to the action of heat and chemicals during laundering than those of the fabrics composed of the weaker and partially immature fibers.

Some mills may prefer the Clegg method using the mercerization test for fiber maturity while others look upon the polarized light as the best method. Both methods possess merit and due to lack of space the writer will not attempt to cover the highly technical phases of these methods since these points are shown in the references cited.

In summing up these different improved methods for cotton fiber testing the writer trusts that this will bring them to the attention of the progressive leaders in the cotton growing and consuming fields. Practical studies by these methods can be applied from three-fold standpoints; that of the cotton grower, cotton merchant, and the cotton consuming industry.

First for the cotton grower, the State experimental laboratories can now furnish the cotton grower fuller and more practical information on what type of seeds and fertilization may aid them in producing "premium" cottons.

Second, for the cotton merchants, a small well organized laboratory can prove invaluable in aiding them to furnish the types of cotton that meet the manufacturing requirements of their customers. The cotton merchant can study the types of cotton fibers from season to season and through precise methods of evaluating the cotton fiber, he can then render a valuable technical service to those mills not large enough to possess fully equipped laboratories and trained personnel to carry on these necessary tests and recording of results.

Laboratories conducted in textile mills in co-operation with their cotton classing departments can be made of value to a manufacturer through aiding and checking all technical data on the cottons under consideration and then making specific and precise recommendations as to purchase. The older methods were to take personal recommendations entirely and carry through mill manufacturing tests. This is time-consuming and in the meanwhile the cotton under test may have been sold.

In other cases, the cotton buyer made purchase of cotton and then ran the manufacturing test; the goods made from the cotton failed to meet the necessary specifications and the mill has a lot of unsatisfactory cotton on hand that must be handled at a loss as they do not wish to carry large cotton inventories. Through the use of ap-

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Carding and Spinning Discussed At Meeting Of Eastern Carolina Mill Men

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only a very small number of opening and cleaning machines, and with a condition like that it is almost impossible to remove all the particles of dirt and the short fibres and neps by bringing it through just one time. That is the reason most of us go back and doublecard it, in order to get out all the dirt, etc.

Chairman: Do you say you go back and run it through the opening equipment again?

Mr. McDowell: No, sir. I say most of us have a tendency to do that, but I think if you do it will injure the fibres. If you have a very elaborate equipment of opening machinery and pickers you eliminate the trouble of having to go back and run it through twice.

D. E. Long, Oxford Cotton Mills, Oxford: I should like to ask Mr. McDowell to explain a little more the last part of his statement. Where does a picking room cease to be an ordinary one and become an elaborate one? What machine makes it elaborate?

Mr. McDowell: What I mean by an elaborate opening and picking room is one that has all the latest and up-to-date cleaning equipment, such as the gyrator and such as the new reserve blending machines on the pickers, and things along that line. As to what I mean by just a very few machines, a lot of the mills just have a very few, an opening machine and a one-process picker. With such equipment you card the stock through, and when you get it through naturally it looks bad, and you have to go back and run it through again in order to get out all the things that should come out in the opening machinery. I consider that when a mill has just one hopper section, which is fed into there, and a Centrif air machine, and that is fed on into one Buckley beater section, and that goes on into say a vertical beater, and from there it goes on through to the picker room, to the one-process picker, it has not a very elaborate opening and cleaning machinery set-up. I think that will answer the question about one that is not very elaborate. If you want one that is very elaborate, I think there are a number of machines that yau can use without injuring the fibre. You can have a bale breaker, which has the apron, to break up the bale, feed it into a Centrif air machine, and let that go into another hopper section, which controls the feed into the Buckley section (38-inch Buckley beater). From that it goes into the vertical beater and from there goes into an improved opening and cleaning machine which they call the gyrator. From there it is either baled up and sent to the dye house to be dyed or it is carried into the picker room, where it goes through one process of picking. On the first feeder section of your one-process picker you can put on one of the improved beaters in that section, which I do not consider injures the fibre but does a whole lot of cleaning. That is the multi-blade beater. Then it goes into a two-blade beater, and then into the carding beater or finisher beater. On these machines you can also have the reserve blending hopper, which helps the evenness of the stock coming through.

That is what I consider an elaborate equipment of opening machinery.

Chairman: Have you ever run any double carding by running it on a lap machine and putting your spools behind, just like a lap?

Mr. McDowell: Yes, sir. That is the reason I brought out the point that most of us sometimes double-card by bringing it all the way back through the opening and picking machinery again, due to the fact that we do not have a sliver lap machine. If you have a sliver lap machine you can run it through that. It has 42 ends on it, I think, which are condensed on the card to make a 40-inch lap. In that way you avoid carrying it back to the opening machine.

J. F. Schaeffer, Spinner, Patterson Mills Co., Roanoke Rapids: In double carding we have an advantage there over merely cleaning the staple, do we not? Don't we get a smoother and more even finished product? Is that right, or not?

Mr. McDowell: I do not exactly get your point on that, Mr. Schaeffer, as to the evening up of it.

Mr. Schaeffer: Don't the fibres lie better in the finished product?

Mr. McDowell: Well, naturally, when you carry it through the first time and then start back and carry it through a second time it is bound to be cleaner and in better condition. Naturally your fibres are lying more parallel. But the reason you run through the second time, as I understand it, is not for the cleaning so much as to remove the neps. If that is the reason I would not say it improves the cleaning, so far as removing any impurities that would show up in the cloth.

Chairman: So you hardly think it would be possible to have cleaning equipment that would eliminate double carding?

Mr. McDowell: I think you can have cleaning machinery enough to eliminate everything that will pass up into the cloth except the neps.

Chairman James: I think I have heard that some other place. (Laughter.) Is there any more discussion on double carding? Some of you old carders ought to be able to tell us something about that.

W. V. Myers, Asst. Manager, Erwin Cotton Mills Co., Durham: I think Mr. McDowell said the right thing a while ago. If we could just card slowly enough, I think that does more than double carding to get rid of the neps—if you can keep your carding slow enough and light enough. As to proper equipment in the opening room, I would add to what he had on beaters. I believe he started off with a bale breaker. I think a beater would be a good addition to it. With the proper picker, and the blending attachment on it, then if you strip your cards and strip them often enough, and keep the card clothing in good shape, with the proper setting, I think you can get a very good product without doing double carding. Of course, much depends on the quality of the goods that you are going to turn out. If you are required to have no neps whatsoever, then you will have to double-card. But I think with proper equipment if you card slowly enough you will get a very satisfactory product.

Mr. Harden: With two eight-hour shifts, and on 1-inch staple, how often do you think the cards should be stripped, if carding eight or nine pounds an hour? And

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TEXTILE BULLETIN

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Contributions on subjects pertaining to cotton, its manufacture and distribution, are requested. Contributed articles do not necessarily reflect the opinion of the publishers. Items pertaining to new mills, extensions, etc., are solicited.

Shrinkage in Spindles

Only a few years ago we took great pride in the expansion of the cotton textile industry and there was an almost weekly mention of new cotton mills and the enlargement of existing plants. Every new plant meant an increase in employment opportunities.

Today cotton mills are being dismantled even faster than they were being built a few years ago, but as such news is bad news, very little mention is being made.

A few years ago there were 38,000,000 cotton spindles in the United States and in 1923 there were 35,512,000 in operation.

The steady dismantling of mills in New England and the suspension of the expansion of mills in the South, has brought the total number of spindles down to 26,539,000 and the last census report showed only 21,786,000 in operation.

In April, 1923, New England was operating 19,439,460 cotton spindles, but the last report showed only 4,757,946 in operation. It appears that there were only 6,921,496 in place whereas in August, 1923, New England had 20,939,000 spindles.

New England has dismantled more than 14,000,000 cotton spindles and will probably dismantle mills with another 2,000,000.

While spindles in place in the United States have decreased from 38,000,000 to 26,500,000, and while operating spindles have decreased from 35,512,000 to 21,786,000, the population of the United States has increased from 118,000,000 to 130,000,000.

We now have less spindles and less looms per 1,000 population than at any time in the last fifty years, and if the heel of Government could be removed from business the cotton mills of this country would find it difficult to supply the demand.

Thanks to Mr. De Mille

Cecil B. De Mille, the moving picture director, is due the thanks of the cotton textile industry for the boost which he gave cotton goods and Cotton Goods Week at the close of Lux Radio Hour last Monday night. In a very graceful manner Mr. De Mille called attention to the fine quality and style of the cotton goods which were being offered by merchants throughout the country and urged purchases.

A Senator Investigates Labor Board

Senator H. Styles Bridges of New Hampshire, who declares that throughout his entire public career he has championed every just cause of labor, after assuming the role of spectator and sitting through hearings of the National Labor Relations Board, declares that he "witnessed such scenes as few Americans would believe could take place under the flag of freedom."

Senator Bridges further says:

> The peculiar inquisitory methods of its trial examiners are so nearly identical wherever they appear that there seems to be no question but that they come from a common source.
>
> My investigations lead to the conclusion that these gentlemen do not embody individually or collectively that underlying all-pervading principle which seems to guide the Board and its Examiners.
>
> The master mind of the Labor Board is one David Joseph Saposs, whose title is that of Industrial Economist. He is the informed professional radical laborite of the Board. He was born in Russia and has been an indefatigable radical propagandist in the United States for many years. He was sponsored by Madam Perkins, going to the Board from her immediate staff. He is a friend and associate of C. I. O. leaders Sidney Hillman, Clinton Golden, and others.
>
> Today this radical Russian, of the New York garment trade union, is probably the most influential factor in the Nation in guiding the destinies of labor relations in its many industries.

In making the investigation and giving the facts to the public, Senator Bridges has rendered a service to the people of the United States, but what is he going to do about it?

The National Labor Relations Board is the most contemptible political organization which has existed since the constitution was signed, but members of Congress are afraid to even investigate them.

A Russian radical is being allowed to wreck the industries of this country with alleged hearings which even two years ago would not have been permitted to be staged anywhere outside of Russia.

A Voice From Down the River

In the adjoining column we are publishing an open letter from Derwood Deaver to D. K. McColl, Chairman of the Board of Directors of the Marlboro Mills, McColl, S. C.

Mr. Deaver, who is editor of the local newspaper, took an active part in the labor troubles which led to the contract which the Marlboro Mills signed with the C. I. O. and which caused us to write our, now famous, editorial entitled "Sold His Employees Down the River."

From his close contact with the employees of the Marlboro Mills, Mr. Deaver has been able to observe the operation of the C. I .O. contract, and being interested in the welfare of the employees rather than the C. I. O., has seen nothing which they have gained as the result of permitting thousands of dollars to be taken from their pay envelopes and delivered to union organizers. Mr. Deaver has witnessed the greed of the racketeers in demanding the deduction of the 25 cents for weekly dues even when the employee could get only an hour's work and a pay of 27 cents.

Where the C. I. O. have secured contracts without the check-off the members of the union have refused to pay dues and about the only money the C. I. O. have been able to get out of the South has been from the employees of the Marlboro Mills.

We understand that the Marlboro Mills have notified the C. I. O. that they would not renew the contract when it expires next month and Mr. Deaver feels that even if the contract is renewed it should not contain the check-off.

He feels that if any employee wishes to pay dues to a union it is his right, but that forcing a man to pay by taking money out of his pay envelope is un-American and puts him into the slave class. The Marlboro Mills and their employees should insist upon the full amount of the wages being paid to the employees and their being allowed, as free men, to decide what amount they will pay to the union just as they decide what amount they will pay to the church.

The check-off is the union organizers' method of forcing an employee to pay them. It has no connection with better wages or shorter hours nor does it benefit the employee in any way.

An Open Letter to D. K. McColl

Mr. D. K. McColl,
Treasurer Marlboro Mills,
McColl, South Carolina.

Dear Sir:

I have for some little time been toying with the idea of writing this letter. Yet, I have neglected doing so, chiefly I suppose because it is so hard for most of us to admit that we have made a mistake.

You may or may not remember that I had a small part in the organization of the Marlboro Mill's labor about a year ago. I was Assistant Chairman of the Strike Committee and Chairman of the Educational Committee of the local T. W. O. C.

Please believe me when I say that I was very sincere at that time in my efforts to assist in making this town a Mecca for the working man. I felt that the Union was the medium through which all this could be accomplished. But alas, I failed to take into consideration the selfishness and greed that seems to be one of the attributes of human nature.

It is my opinion that the T. W. O. C. has failed to do the people, the town or the mills any material good. It seems to me that all they have really accomplished has been the "Check Off" through which they have managed to pluck about four thousand ($4,000) dollars from the pay envelopes. The same people that paid this money are now on relief.

When the T. W. O. C. organizers were in full swing here, they made much fun of a few small pay envelopes that they managed to dig up (unskilled labor) at that time. But allow me to say right here that B. U. (Before Union) I never saw an envelope for as little as two cents! The records in your office will show that on several occasions people worked as little as one hour in one week and on a wage scale of 27 cents per hour. On the demand of the C. I. O., and in accord with the contract, your clerks removed 25 cents of the 27 for the current week's dues, leaving a balance of 2 cents. Let us laugh that off if we can! Or is it a laughing matter? I can't think that it is.

The T. W. O. C. had an opportunity to put themselves in solid with these people here when the mills shut down the first of the year. But did they do it? No. Why? Because it is the purpose of people of their kind to make money, not spend it. I have not seen a single labor organizer on the W. P. A. but its ranks here are filled with labor that was beguiled by the leeches who propose to live off the efforts of honest labor. I don't feel that the thinking men and women of McColl will allow this situation to last.

I want to thank you for the things that you have done for the people here in a quiet way. I have learned through a reliable source that you gave $500 of your own money to assist the needy during the stoppage of the mills. I know that you have given them rent and coal.

I am now and in this manner offering you my sincerest apologies for having forgotten my Americanism, for even so short a time, by assisting this band of "Gunless Robbers" in trying to tear down American institutions that it took our people centuries to build.

Sincerely,

Derwood Deaver.

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Mill News Items

MONROEVILLE, ALA.—At an estimated cost of $45,000, including equipment, the Vanity Fair Silk Mills of Reading, Pa., recently awarded the contract to Agee & Kimbrough Co., of Pine Hill, Ala., for a new one-story mill.

RALEIGH, N. C.—Secretary of State Thad Eure issued a charter May 13th to the Jackson Hosiery Mills, Inc., of High Point, to manufacture and sell hosiery with $100,000 authorized capital and $75,000 subscribed stock.

The High Point mill had W. L. Jackson, J. A. Myatt and W. M. Field, all of High Point, as incorporators.

DOUGLASVILLE, GA.—The Beaver Mills, manufacturers of broadcloths, sateens, pongees and twills, have resumed operations after being closed down for several weeks. With the Beaver Mills having been put back into operations, all three local mills are now operating on full time schedules.

ROME, GA.—With only experienced bedspread workers on the payroll, the newly formed Colonial Chenille Corporation, bedspread manufacturing concern, is scheduled to operate 35 machines which have already been installed in a mill building here which was formerly used by the West Rome Hosiery Mill. There will be 35 workers to operate these machines. Additional workers will be added as they are needed. Nevin Patton is manager of this new company.

FAYETTEVILLE, N. C.—It is reported here that a new hosiery plant for the manufacture of half hose will be opened here at an early date. This will make the second hosiery manufacturing plant to locate here within the past few weeks as the Fayetteville Knitting Mills have just gotten into operation and are manufacturing women's silk hosiery. The new mill will be operated by entirely different interests, it is stated.

HICKORY, N. C.—Hickory Weavers, Inc., which has been in bankruptcy, is now owned by Henry C. Cline, local building contractor, according to information which has just been released in textile circles here. Mr. Cline's private bid of $25,000 has been confirmed by Judge J. A. Rousseau, of North Wilkesboro, N. C., at Newton, N. C.

Dr. George E. Bisanar, of Hickory, and J. L. Snyder, of Charlotte, N. C., will be associated with Mr. Cline in the operation of the mill, according to information here.

It is understood that the mill will be reorganized and operation resumed when business conditions become favorable, although no definite plans have been made thus far.

In April H. H. Miller, of this city, made a bid of $11,000 for the mill at a public auction held here. The sale remained open for private bids for the period designated by law when the court failed to confirm the bid made by Mr. Miller. During that time Mr. Cline offered $25,000 and this was accepted.

Mill News Items

CHARLOTTE, N. C.—B. B. Gossett announced May 19th that two plants of the Chadwick-Hoskins Company here and the Martinsville Cotton Mill Company, Inc., Martinsville, Va., would resume operations Monday after being closed about five weeks.

Gossett said he did not know how long the operations would continue. That, he said, "would depend upon business conditions which, unfortunately, are still very unsatisfactory in practically all lines of cotton textiles."

He also announced that operations would be resumed Monday at the Calhoun Mills, Calhoun Falls, S. C., and at the Williamston and Toxaway plants of Gossett Mills, Anderson, S. C.

FRONT ROYAL, VA.—According to a survey here at the local unit of the American Viscose Corporation, the installation of the rayon manufacturing machinery has begun. Chief Engineer James Bennett, of the local unit, recently announced that the machinery would begin arriving here and that during the next few months many hundreds of feet of pipe will be installed, and at an early date many tanks will arrive here for installation. Mr. Bennett stated that the local unit will be the largest plant of its kind in the world, and is expected to employ approximately 6,000 operatives when it reaches capacity production.

GREENVILLE, S. C.—Two textile manufacturing mills of Greenville County have authorized the payment of dividends totaling $75,000 within the next six weeks.

Directors of Piedmont Manufacturing Company, at Piedmont, authorized the payment of $48,000 on July 1st as a common stock dividend. The directors also re-elected S. M. Beattie as president and all other officials of the firm.

The payment of $27,000 as a common stock dividend on June 1st was authorized at a meeting of the board of directors of Dunean Mills, according to R. E. Henry, president. This will represent 40c a share on common stock.

VALDESE, N. C.—The Valdese Manufacturing Company, manufacturers of high-grade carded single yarns, has installed nine new Universal No. 44 Roto-Coners replacing thirteen other machines of the similar type.

The company has likewise revamped the spinning divisions of the mills. One dozen new Whitin long-draft frames have been installed in Unit No. 1, and 10 frames have been changed over to long draft spinning in this unit. Ten new Whitin frames have been installed in Unit No. 2, and 24 were changed over.

In the dyeing and bleaching plant two vertical Gaston County Machine Company, of Stanley, N. C., kiers have been reworked, and plans are under way to revamp this entire department. New 25-horsepower motors operate the circulation systems of the two revamped kiers. The officials of this company state that the mill has operated on full time on orders throughout the present recession.

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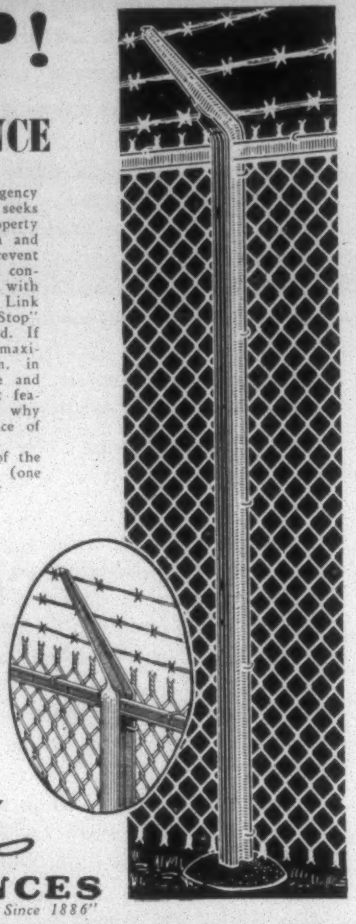

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Carding and Spinning Discussed At Meeting Of Eastern Carolina Mill Men

(*Continued from Page 17*)

how often should the stripping brush be used?

A. L. Oldham, Carder, No. 2 Mill, Erwin Cotton Mills Co., Erwin: I think the cards ought to be stripped every three hours. Of course, it depends upon the grade of cotton. With a low grade of cotton it is necessary to strip them oftener.

Chairman: You say on a production of eight or nine pounds an hour they ought to be stripped every three hours?

Mr. Oldham: Yes, sir.

Mr. Harden: How often would you use the brush?

Mr. Oldham: Once a week.

Chairman: Mr. Byrd, what do you think about that?

W. T. Byrd, Carder, Erwin Cotton Mills Co., Erwin: It depends upon the stock you are running, as Mr. Oldham said. It also depends on the humidity in the room. If you run heavy humidity it is going to load down. If it is dry in the room you do not have to strip as often. I think you can strip too often. After the wires get full the card ought to be stripped. If you do not strip them, of course they load down, and you have a lot of those neps coming through. As for setting any definite time, I would not say.

Chairman James: I think the general practice would be stripping about every three or four hours. We are stripping twice every eight hours, are we not, Mr. Byers?

Mr. Byers: Yes, sir, I think we are stripping twice in eight hours. Of course, lots of times it depends on the stripper. If the clothing is not in good shape the stripper will not strip the card as it ought to be done. Often he is rushing to get off and will not go back over it. So it depends upon the stripper. Sometimes, after grinding the card, it has a tendency to be rough, and you can not pull all the strips out of it. We make it a rule that our strippers mark such a card and report it, so that it can be stripped with a stripping roller.

A Member: Most of the carders have told me we clean the sliver better with low humidity in the room. I notice Mr. Byrd says his wires fill up more quickly in damp weather. It seems to me there is something to be explained there. If it fills up more quickly in damp weather, then evidently the humidity is taking out more. I want to know where it goes, if in dry weather it takes out less.

Mr. Byrd: You know, sometimes sliver vary in weight in damp and in dry weather. You weights are not the same in damp weather and dry weather. Will you tell me where it went? (Laughter.)

Chairman: Well, we have rambled a bit in the last five minutes. Let's get back to double carding.

Mr. Lanier: I wonder how many men in here are doing double carding?

Chairman: Raise your hands. I don't believe they are here today.

A Member: I move we drop the subject.

(*Continued Next Week*)

Northern Master Mechanics To Meet in Greensboro

The newly-created Northern Master Mechanics' Division of the Southern Textile Association will hold its first meeting at the White Oak Division of the Cone Memorial Y. M. C. A., Greensboro, N. C., at 9:45 a. m., June 4th.

W. H. Leathers, of Consolidated Textile Corporation, Lynchburg, Va., is chairman of the Division, and will preside at the meeting. L. M. Kinkaid, The Kendall Company, Paw Creek, N. C., is vice-chairman, and E. E. Edmiston, Mooresville Cotton Mills, Mooresville, N. C., is secretary.

The purpose of the organization of this new Division of the Southern Textile Association is to make the meetings available to more master mechanics, in that they will not have to travel so far to the meetings, and it is urged that all master mechanics attend this meeting and avail themselves of the opportunity to discuss their problems with others.

Questions for discussion follow:

1. What can be done to affect power savings and reduce the peak demand?
2. What can be done to reduce power consumption on looms?
3. What is best method of repairing concrete platforms and floors?
4. Do nickel iron castings have enough increased resistance to wear and shock loads to justify the increased cost over grey iron castings?
5. Should machinery lubrication be under the supervision of the master mechanic?
6. What advantages do you find in the new so-called air-cooled motors?
7. What method do you use for repairing loom parts and returning to bins?
8. What system is used in your plant to keep up with your change gears, and what would be a better system?
9. Should master mechanic be consulted before coal is purchased?
10. Do you systematically inspect steam traps for leakage and what system do you use for keeping them in repair?
11. Are you using treated water in your humidification system and what effect does it have on rails, thread guides, loom reeds, etc.?
12. What part should the master mechanic play in promoting safety?

Textile Students Win Scholastic Honors

On May 5th, North Carolina State College observed its 13th annual Scholarship Day by presenting awards to students who had distinguished themselves in scholarship.

Outstanding among the awards was the presentation to W. P. Crawley, of Littleton, of the medal awarded annually by the National Association of Cotton Manufacturers to the most proficient textile student in the graduating class. The award has been offered on a national basis for 30 years to textile schools of recognized standing which could meet the requirements of the National Association, and State College has won it every year except 1913 and 1914.

Dean Thomas Nelson, of the Textile School, presented the award to Mr. Crawley, who recently was honored when a fabric designed by him and T. W. Bridges won the grand-prize in the annual Style Show.

C. J. Dulin, of Charlotte, a senior in Textile Chemistry and Dyeing, was awarded the Sigma Tau Sigma Cup for the highest scholastic average in the Textile School.

W. P. Crawley of Littleton, N. C., who was awarded the medal given annually by the National Association of Cotton Manufacturers to the most proficient textile student in the graduation at North Carolina State College.

P. D. Kaley, of Scranton, Pa., a student in the Textile School, was presented the order of 30 and 3 award for highest average among freshmen living in dormitories.

Following the presentation of the awards forty Textile students were among those commended for scholastic attainments.

Textile students commended for high honors were: G. P. Boswell, Burlington, N. C.; W. L. Carter, Jr., Franklinville, N. C.; W. P. Crawley, Littleton, N. C.; R. E. Dixon, Winston-Salem, N. C.; C. J. Dulin, Charlotte, N. C.; C. P. Echerd, Greensboro, N. C.; W. L. Fanning, Shelby, N. C.; P. D. Kaley, Scranton, Pa.; J. M. Mauney, Lincolnton, N. C.; Charles Widlitz, Rockville Center, N. Y.; J. W. Wilson, Louisburg.

Textile students commended for honors were: G. L. Boney, Wallace, N. C.; R. E. Brannon, Rockingham, N. C.; F. T. Broyhill, Statesville, N. C.; F. M. Davidson, Gibsonville, N. C.; C. M. DeMarcay, Jr., Savannah, Ga.; C. W. Enfield, Graham, N. C.; S. B. Frank, Wilson, N. C.; C. L. Fulp, Kernersville, N. C.; R. B. Graham, Charlotte, N. C.; D. E. Hamilton, Charlotte, N. C.; G. V. Hanna, Mooresville, N. C.; W. L. Hunter, Salisbury, N. C.; E. S. Johnson, Kannapolis, N. C.; K. A. Leer, Cliffside Park, N. J.; H. R. McSwain, Shelby, N. C.; H. P. Mullen, Lincolnton, N. C.; J. I. Munyan, High Point, N. C.; Harold Nass, New York City; J. E. Odegaard, Montclair, N. J.; D. L. Ramsey, Charlotte, N. C.; M. L. Slesinger, Raleigh, N. C.; M. B. Sokoloff, Bronx, N. Y.; C. J. Squires, Draper, N. C.; J. H. Stevens, Lancaster, S. C.; Sidney Tager, Brooklyn, N. Y.; R. A. Taylor, Whitakers, N. C.; C. K. Watson, Red Springs, N. C.; A. R. Williams, Jr., Greensboro, N. C.; C. B. Young, Ivy, N. C.

It is interesting to note that a number of the young men honored for scholastic attainments are sons of men who are well known in the Southern textile industry.

Cotton Spinners Operate at 85.7% in April

Washington, D. C.—The Census Bureau reported the cotton spinning industry operated during April at 85.7 per cent of capacity, on a single shift basis, compared with 101.1 per cent during March this year, and 146.7 per cent during April last year.

Spinning spindles in place April 30th totaled 26,539,440, of which 21,786,054 were active at some time during the month, compared with 26,524,914 and 22,288,098 for March this year, and 26,991,338 and 24,728,466 for April last year.

Active spindle hours for April totaled 5,265,957,018, or an average of 198 hours per spindle in place, compared with 6,485,416,003 and 245 for March this year, and 9,165,313,688 and 340 for April last year.

Spinning spindles in place April 30th in cotton-growing States, totaled 18,816,872, of which 16,428,336 were active at some time during the month, compared with 18,793,508 and 16,700,022 for March this year, and 18,903,660 and 17,763,054 for April last year.

Active spindle hours in cotton-growing States for April totaled 4,166,702,093, or an average of 221 hours yer spindle in place, compared with 5,063,517,605 and 269 for March this year, and 6,929,810,933 and 367 for April last year.

Active spindle hours and the average per spindle in place for April by States follow:

Alabama, 417,372,365 and 219; Georgia, 692,827,767 and 214; Mississippi, 45,464,680 and 219; North Carolina, 1,231,308,699 and 203; South Carolina, 1,392,479,281 and 244; Tennessee, 154,392,768 and 257; Texas, 69,811,621 and 271; Virginia, 130,417,088 and 206.

Cowpens, S. C.—A petition for reorganization of Cowpens Manufacturing Company, at Cowpens, under Section 77-B of the Bankruptcy Act, has been filed in Western South Carolina District Court, it was learned recently.

Judge C. C. Wyche has signed an order accepting the petition and setting May 23rd at 10 a. m., at Spartanburg, for a further hearing.

The order appoints Stanley W. Converse, superintendent of Clifton Manufacturing Company, as temporary trustee for the Cowpens property, under $25,000 bond, and instructs him to prepare and file within 15 days from date of order "such information as may be necessary to disclose the conduct of the affairs of Cowpens Mills," in lieu of schedules. An inventory of the company's property is also to be filed at that time.

The Cowpens plant was closed several weeks ago with the management announcing an "indefinite" shutdown. The company is capitalized at $468,000 and has 20,048 spindles and 532 looms. It manufactures sheetings, print cloths and novelties. The officers are Ben Hill Brown, Spartanburg, president; E. S. Tennent, Spartanburg, buyer; J. C. Day, secretary and assistant treasurer, and L. A. Hamer, superintendent.

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Applying Research Studies to the Textile Industry for Profit

(*Continued from Page 16*)

plied research testing methods, the manufacturer can obtain the joint advantages of the practical personal judgment of the cotton classer plus the precise evaluation of these improved cotton fiber testing methods.

In a latter issue of TEXTILE BULLETIN, the writer will endeavor to cover the progress made in applying research methods to mill materials, testing methods for finished textile goods, and the processing materials used in finishing textile goods.

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New Knitted Short, Runproof Hose Patented

Still another idea of making men's knitted shorts became known with the issuance of U. S. Patent No. 2114634 to Henry Jean, assignor to Leo J. Layden, Hamilton, Ont. One of the five claims, filed June 2nd of last year and previously in Canada on June 3, 1936, reads as follows:

"A man's unwergarment having a center front section composed of triple panels disposed in series between the waistband and the lower crotch extremity, the intermediate panel having a fly opening extending the full distance between the adjacent edges of the upper and lower panels and reinforced at the ends by connection therewith, the lower panel having a central vertical box pleat continuing downward directly from the lower extremity of the fly opening."

Two other patents apply to the method and mechanism for making runproof full-fashioned hosiery. They are Nos. 2114955 and 2114956, both granted to Ellsworth E. Carlson and assigned to the Van Raalte Company.

Apparatus for treating stockings and other fabrics mounted on moving forms is patented by Fritz Schuster of Chemnitz, Germany. The patent is No. 2114432.

South Carolina Weavers Meet At Spartanburg

(*Continued from Page 13*)

Mr. McNeill: I haven't anything of recent date that I can give you. We haven't figured it out recently.

Chairman Crow: I don't know who sent up this question , but I hope the information given will be helpful to him.

We have another question that was sent up, which I shall call No. 9. It is: "If you have belt-drive looms, do you clean the face of the belts periodically? Do you attempt to dress the face of the belts? If the belt is sticky, do you starch the face or raise the lug straps to make the loom run more smoothly?"

I am sorry that I can not help the gentleman that is asking this question, due to the fact that we have a power-driven mill—every loom in it.

Mr. Lockman: I should like my overseer of weaving to say something on that.

F. D. Lockman, Jr., Overseer Weaving, Monarch Mills, Lockhart Plant, Lockhart: We dress our belts periodically, Mr. Crow. We dress the face of the belt and never put any starch on it. We dress them about once every two weeks, and we have our fixers clean the back of them once a week. We never change our lug straps for a sticky belt.

A. L. Burnet, Asst. Supt., Ware Shoals Mfg. Co., Ware Shoals: May I ask the gentleman what he does when the loom is running roughly on account of the belt's being sticky? Does he raise the lug straps?

Mr. Lockman, Jr.: We clean it and dress it or cut the belt, whichever is necessary. Sometimes that is due to the belt's getting wet from being under a humidifier.

Chairman: Is there anything else on that?
Mr. McNeill, I believe you wanted to bring up something, did you not?

Mr. McNeill: Would we be justified, in changing from 64 x 60 to 80 square, in destroying that pattern, in putting on three bars of drop wires? In other words, we have two bars. I know both methods are in common practice, two and three. I want to know which is more commonly used, two bars or three bars, on 80 squares.

Mr. Hudgens: We have had the two bars on 80 square, and we found when we changed to three bars it increased our production about two per cent. The three bar does not crowd it so much.

Mr. Lockman, Sr.: I don't understand that. Do you have three bars or four?

Chairman: You can have two, three, or four. You can have up to six.

Mr. Lockman, Sr.: You can change from two bar to four bar without destroying your pattern.

Chairman: Can anyone else shed any light on this question?

Question: How would you do it, Frank?

Mr. Lockman: How would you do it? With two bars your threads are all on one harness, on one bar, and on the other you raise your harness up and run a string

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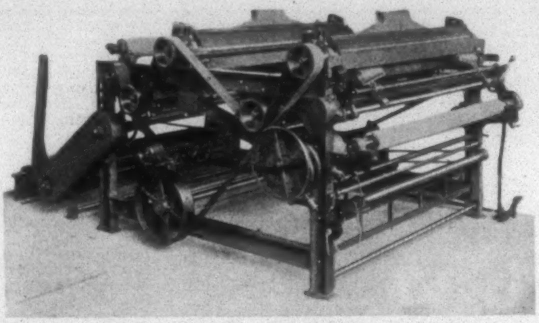

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Can You Beat This?

A worker at a mill in South Carolina died this year. He had been only a part time worker at that mill, his estate was entitled to only $4.96 under Federal old age benefit law. He left a widow and ten children. This week the widow got a check for $1.76 and each of the children got a check for 32 cents. Ain't relief wonderful! —*The Observer.*

Long-Stored Cotton Often Deteriorates, Expert Discloses

Washington, D. C.—C. L. Finch, government cotton technician, told the Senate Agricultural Committee recently that cotton stored for several seasons sometimes deteriorates in quality.

His comment was elicited by questions from E. T. Creekmore, manager of the American Cotton Cooperative Association, during committee investigation of charges that farmers lost millions of dollars through under-classing of government pool and loan cotton by A. C. C. A.

He questioned Finch about differences between quality tests on the same cotton by government experts in an effort to show that A. C. C. A. classing was fair.

Finch, reading government reports, said cotton stored in the Southwest at Houston, Galveston and Pensacola warehouses, sometimes lost quality.

"Cotton classed as light spotted shows up as heavy spotted or tinged," Finch said.

Earlier the witness said a series of government tests of the same cotton had varied from 3 to 30 points.

Previous witnesses for the Senate committee staff testified that underclassing by A. C. A. cost cotton growers an average of $3 a bale on loan cotton that was reconcentrated and released.

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South Carolina Weavers Meet At Spartanburg

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through there with a needle—a wooden needle, and separate half of it. Run a little ribbon through there and get your additional bar. We did that at Lockhart on 816 looms. We thought we had to destroy the pattern to get to four bar. So some sweeper or some boy there came along and told me how to do it. I told them to go ahead and do it, so we changed 816 looms from two-bar to four-bar and did not destroy any patterns.

Question: The gentleman from Chesnee said it increased production when he changed from three-bar to four-bar. Did it improve the quality of the cloth?

Mr. Hudgens: I don't know whether it put any better face on the cloth, but it did increase our production.

Mr. Lockman: I might explain a little more than I did. In two-harness goods there are four bars on the harness, two on the back and two on the front. I believe this boy did tell me to loosen that thing and let two bars drop down on the harness, and that would give me two sheds.

A Member: Mr. McNeill wants to go to three bars, though.

Mr. Lockman: I don't understand that three-bar business.

Chairman: Is there anything else on cotton weaving?

Mr. McNeill: Which is more commonly used on 80 squares, single or two-ply twisted selvage?

Chairman: Which is more commonly used on 80 squares, single or two-ply yarn on selvages? Mr. McNeill wants to know.

H. C. Estes, Overseer Weaving, Beaumont Mfg. Co., Spartanburg: We use two two-ply ends on each side, the rest of it single.

Mr. McNeill: My question is whether it is twisted two-ply.

Horace Fowler, Second Hand Weaving, Beaumont Mfg. Co., Spartanburg: Those ends are twisted.

Chairman: How many men here are using twisted two-ply yarns in selvages on 80 squares? Hold up your hands. Twelve using two-ply. How many are using single? One using single as against twelve using two-ply.

Mr. Turner: Just for Mr. McNeill's information, we use eight double-ply yarn in each selvage, and four with single yarn. As we were discussing earlier in the day, sometimes we have to borrow something, and that is a reserve there to borrow from.

Chairman Crow: Are there any other questions on cotton weaving? If not, there are just a few questions on rayon weaving that we will not take up. The first one reads as follows: "We sometimes see a loom run out a rayon warp making perfectly smooth and even cloth, then when a new warp of the same construction and weave is tied back to the pattern, the next two or three rolls of cloth will we wavy. What is the cause of this?" What do you say about that, Mr. Franks?

Mr. Franks: It seems to me it would be in the let-off. The let-off that you have on that loom I think would cause it.

Mr. Batson, Southern Shuttle Co.: I know one mill that experimented along that line and decided to use smaller beams and put a smaller amount of yarn on the warp beam, because the warp was so tight on the last portion of the beam. Then they got it adjusted, then when they put on a new beam it was not as tight. This mill put in smaller beams; it had beams down to twelve inches in diameter. When that was done it eliminated the trouble.

Chairman: You know we used to think tha twe could not fill the beam more than half full.

Mr. Batson: It seems to me we are getting back to

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Cotton Goods Markets

New York.—Cotton gray goods demand last week was steady and sales were well in excess of present curtailed mill output.

Sales of standard cloths for apparel purposes, most active items in print cloths, ran into several million yards. Sheetings sold in moderate amounts at firm prices. Heavy goods were a little more active and steady. Combed goods were quiet with values remaining steady.

Finished cotton goods improved. Percales sold in small lots for fall. Tickings were in better demand and buyers showed more interest in work clothing fabrics. Domestics moved well. Buyers found it difficult to obtain desired styles in fabrics for slack trousers and summer suits.

Among important commission houses the attitude toward the current market is that the increase in sales propositions indicates a gradual change for the better. The fact that large numbers of manufacturers and retailers are in for goods is evidence of barren inventories. There are many types of goods on which it is impossible to book new contracts calling for closer than 60 days' deliveries. On some classes of merchandise, which would be called secondary in character, backlogs are accumulating. On goods in this enviable position prices have turned firm, advances having taken place since initial commitments were made. What is lacking is a sufficient number of such evidences of trade activity. When buyers become apprised of the fabrics that are in short supply they are counted on being wanted in sufficient quantities to sell mills into a gradually stronger position.

The belief is widespread that the market is in the midst of a period of steady, consistent buying against actual needs and that it will be less difficult from now on for mills to sell up their current weekly production. Any set-down in rigid curtailment schedules, of course, would result in a complete turnabout and lead to a cessation of buying for practically all of the confidence manifested by buyers is rooted in the belief that mills intend to hold down production until conditions really improve.

Print cloths, 27-in., 64x60s	3¾
Print cloths, 28-in., 64x60s	3⅞
Gray goods, 38½-in., 64x60s	4½
Gray goods, 39-in., 80x80s	4¼
Tickings, 8-ounce	15½
Denims, 28-in.	11
Brown sheetings, standard	9½
Brown sheetings, 4-yard, 56x60s	5⅜
Brown sheeting, 3-yard	6⅜
Staple ginghams	10

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Cotton Yarn Markets

Philadelphia—During the past week inquiries for cotton yarns have been more numerous, and many of the inquiries have been for larger quantities. As most of the interest now being shown in yarn is derived from actual need of additional supplies, the majority of customers are not seeking to cover beyond the end of July, but some are getting quotations on deliveries well into fall and a few indicate that they would cover in part to December 31st, if they could get the type yarn they want at what they consider good prices. Recently the prevailing price range has dropped another notch, setting a new low level, which cannot be blamed entirely on offerings to move stocks. It is pointed out that whenever conditions continue disturbing to yarn spinners month after month, as has been the case now for over a year, the spinners eventually take steps to safeguard their solvency and at the same time enable them to get a fair share of the available business.

It is implied that spinners' costs are not as inflexible as many of them claimed a few months back and at least part of the orders placed lately at lower prices have been taken by yarn mills whose costs have been adjusted in various ways without taking too much out of the yarn. In the counts requiring good staple cotton and also absorbing a large proportion of the yarn mill's expense for labor, there is a special incentive toward such adjustment, it is explained.

Cotton is counted on later to give some support to yarn values, but thus far it has been a hindrance. Yarn mill managements are described by some observers as giving their present cost set-up close scrutiny, with a view to making adjustments which now are becoming clearly necessary if these producers are ever to get back on a real competitive basis.

Southern Single Skeins

8s	16½
10s	17
12s	17½
14s	18
20s	19
26s	22
30s	24
36s	27
40s	28½

Southern Single Warps

10s	17
12s	17½
14s	18
16s	18½
20s	19
26s	22
30s	24
40s	28½

Southern Two-Ply Chain Warps

8s	17
10s	17½
12s	18
16s	19
20s	20
24s	22
26s	23
30s	24
36s	28
40s	29

Southern Two-Ply Skeins

8s	17
10s	17½
12s	18
14s	18½
16s	19
20s	20
26s	23
30s	24
40s	29

Two-Ply Plush Grade

12s	18½
16s	20
20s	20½
30s	25½

Duck Yarns, 3, 4 and 5-Ply

8s	17½
10s	18
12s	18½
14s	19
16s	19½
20s	20

Carpet Yarns

Tinged, 5-lb., 8s, 3 and 4-ply	15
Colored strips, 8s, 3 and 4-ply	15
White carpets, 8s, 3 and 4-ply	17

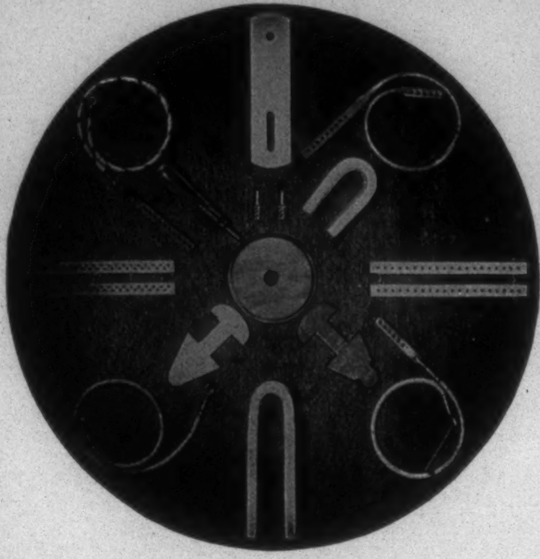
Part Waste Insulated Yarns

8s, 1-ply	14
8s, 2, 3 and 4-ply	14½
10s, 2 ,3 and 4-ply	15
12s, 2-ply	15½
16s, 2-ply	16½
20s, 2-ply	18

Southern Frame Cones

8s	16½
10s	17
14s	18
16s	18½
22s	20½
24s	21½
26s	22½
28s	23½
30s	24½

Rice Dobby Chain Co.



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South Carolina Weavers Meet At Spartanburg

(Continued from Page 27)

that. This mill I was speaking of is a good-sized mill, and it has gone back to smaller beams.

H. C. Cranford, Second Hand Weaving, Monarch Mills, Lockhart: I don't run any rayon, but in adjusting for wavy cloth, when the warp is changed, we look for worn take-up pinion gears. Check the worn take-up pinion gears in looking for the cause of that.

Chairman Crow: We have had some of that same experience in our mill and have found a great many times that it was the pinion gear that was causing the wavy cloth.

Let's go to the next question on rayon weaving: *"Will steel take-up pinions running on steel studs give better satisfaction than cast-iron pinions? Does the steel pinion freeze to the steel stud?"*

Has anyone had any experience on that? It seems not.

The next question reads: *"What can be done to overcome tight selvages in pigment taffetas?"* Is there anyone here who is running taffetas? There seem to be none.

Loom Power

Our last question is: *"Should a loom be run with the same amount of power on both picker sticks; or would it be best to bring the power down to the bare minimum on the battery-end stick and leave a little more power on the lever-end stick, to make sure that the shuttle is driven home under the battery?"*

Let's hear from some of you on that.

Mr. Simmons: I think we had better study over that question a while. Probably it would bring up a lot of discussion. I recall one type of goods we had the construction of which and the yarn of which it was made made it necessary to bring the power on the looms down to the very minimum, even lower than the loom fixers thought they could run them. That question came up, and they found they could take a little more power off the battery end of the stick than the lever end of the stick. We had to leave enough power on the lever end of the stick to make sure the shuttle would always get in the box properly. Then the question came up as to whether it would be better to set that loom up with a little more power on the lever end than the battery end, or would it run more smoothly with the same amount of power on both ends. I don't know, but I believe a loom will run more smoothly and give better all-around results if you have as nearly as possible the same power on both ends.

Chairman Crow: Has anyone else anything to say on this question?

If not, let me say this: If there is any question at all that anyone here would like to ask, on slashing, cotton waving, or rayon weaving, now is the time to bring it up and have it discussed.

Mr. Swetenburg: I should like to know if anyone who is running sago has had any trouble with the selvage dents in the reed cutting out.

Chairman: Are there any men here this morning who are running sago? Or have you used it in the past? If so, can you give Mr. Sewtenburg any information on his question?

A Member: I think Frank Lockman has run it.

Chairman: All right, Mr. Lockman.

Mr. Lockman, Sr.: Mr. Chairman, we ran sago for two or three years.

Chairman: Are you running it now?

Mr. Lockman, Sr.: No. Does that answer his question? That is the reason we quit it.

Chairman Crow: Any other questions?

Mr. Williams, Anderson, S. C.: In changing from long quill and putting in larger shuttles, I have heard of off-center shuttles and off-center pickers, in order to center the shuttles. I want to ask if anyone has tried cutting down the thickness of the binder in order to overcome that. That is, when the binder need re-covering, cutting it down from one-sixteenth to one-eighth of an inch.

Chairman: Has anyone here tried that? It seems not. Have you tried it, Mr. Williams?

Mr. Williams: Yes, sir.

Chairman: Was it satisfactory?

Mr. Williams: It seems to work all right.

Chairman: That eliminates the need of running off-center shuttles?

Mr. Williams: Yes, sir.

Chairman: That is a good suggestion. Thank you. sir.

Mr. Lockman, Sr.: I should like someone to tell me why it gets off center. The binder is on the back, and it is adjustable back and forth. The front box is on the front, and it is adjustable back and forth. Now, how are you going to get it off center?

Mr. Hill: You limit that to your back box plate. You see, when you put in a larger shuttle, all your difference in the shuttle is in the front. All we did was to cut out the under plate a little to compensate that. It is necessary to have the loom in line. We didn't make any difference in the pickers.

Chairman: You did not put in off-center shuttles?

Mr. Hill: No, sir.

Chairman: Those of you who are running off-center shuttles, why are you running them? That is what you want to know, Mr. Lockhart, isn't it?

Mr. Lockhart, Sr.: Yes, sir.

Chairman Crow: There seems to be no answer.

W. B. Morgan, Supt., Florence Mills, Forest City, N. C.: I put in larger shuttles but never did go to the trouble of cutting the binder off. When you put in a larger shuttle, of course that puts your point over a little further. If you pull your picker stick over you can go ahead. It is not necessary to run an off-center shuttle, or anything. Generally all Draper looms have room enough where they transfer to put in what it needs—a quarter of an inch or three-eighths of an inch of leather to hold the picker over in line.

Chairman: Are there any other questions? If not, we are about ready to close. I want to say to any visitors who may not belong to this particular division of the Southern Textile Association that we are very glad and happy to have them with us this morning. I also wish to express my appreciation to the members of this division for the splendid way in which they have co-operated in this meeting. I have served as your chairman for several years; and I have done my best, though I fear it has been a rather poor best. You will have the privilege and opportunity of electing a new chairman this morning, and I want to say that I hope you will give to him the same hearty co-operation you have given me over this long period of years and that you will go even beyond that, and I hope our sectional meetings and divisional meetings in the future will mean even more to us than they have in the past.

We will now have the report of the nominating committee.

Mr. Moore: Mr. Chairman, the committee nominates Mr. Henry E. Littlejohn, stylish and designer for the Drayton Mills, Spartanburg, as the next chairman.

Chairman Crow: Mr. Littlejohn is not here this morning ,but I spoke to him last night about coming, and he said he had some personal business he had to attend to today.

Are there any other nominations?

On motion, the nominations were closed, and Mr. Littlejohn was unanimously elected.

Mr. Crow: In closing this meeting, I want to express the hope that this weavers' section will go along in a fine way and in an even greater way than it has in the past. I assure you of my continued co-operation in whatever you attempt to do.

Mr. Royal, have you any announcements?

Secretary Royal, of the Southern Textile Association, announced the annual meeting at Blowing Rock, N. C., in June, and urged all to attend, promising a good program.

Chairman Crow: If there is nothing else that anyone wishes to bring up, I now declare the meeting adjourned.

(Meeting adjourned at 12 o'clock noon.)

Marion, N. C.—Samuel M. Hamill, of New York City, was re-elected president and treasurer of the Marion Manufacturing Company, Marion, N. C., and Sam L. Copeland, of Marion, was re-elected vice-president and secretary at the annual dliectors' meeting recently. T. M. Marchant, of Greenville, S. C., was elected vice-president and assistant treasurer.

Directors elected by the stockholders were Miss Sarah R. Baldwin, Narragansett Pier, R. I.; Wilfred Andrews, William J. Gallon, Mr. Hamill and Robert T. Stevens, New York; Dr. William K. Prentice, Princeton, N. J.; S. M. Beattie, T. M. Marchant, and J. E. Sirrine, Greenville, S. C.; Mr. Copeland and Crawford F. James, Marion.

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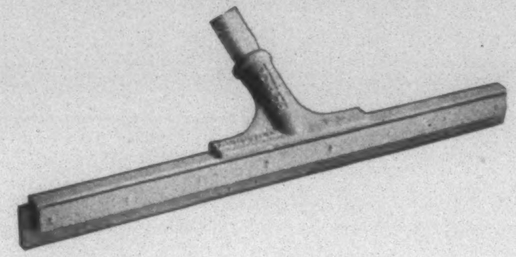

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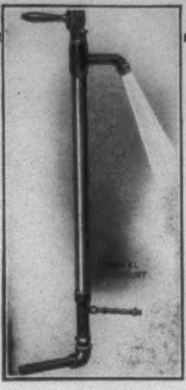

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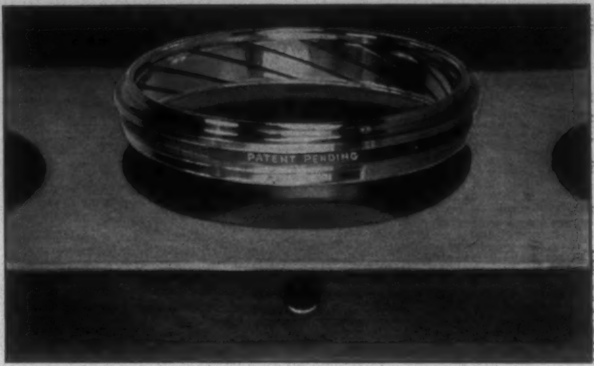

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For Instantaneous Wetting Out Of All Fabrics

DECERESOL* WETTING AGENTS

Decersol Wetting Agents are unusually powerful surface tension depressants. At extremely low concentrations they wet out grey cotton instantaneously. In dyeing, Deceresol Wetting Agents produce thorough penetration of the dyestuff into the fibre, yielding perfectly level shades.

In the mill, Deceresol Wetting Agents save time and money in every operation—where faster wetting means better results in less time. A few of their many uses are:

1 The wetting out of grey cotton piece goods prior to caustic boiling and subsequent chlorine bleaching.

2 Wetting out grey cotton piece goods prior to peroxide bleaching.

3 Mixing with animal and vegetable oils (previously sulphonated) to form a liquid soap possessing strong detergent properties, without affecting colors when used in conjunction with sodium or hydrogen peroxide in bleaching grey cotton piece goods containing vat-dyed colored stripes.

4 Wetting out grey cotton piece goods on a mangle, making them instantaneously and uniformly absorbent, which is necessary prior to grey sanforizing.

5 Mixing with sulphonated vegetable oils for the treatment of cotton (bleached or dyed) fabrics to increase penetration prior to sanforizing.

6 Adding to the dye bath on grey cotton piece goods dyed direct from the bale to produce penetration and uniformity.

7 The preparation of raw stock cotton, yarn, and cotton piece goods prior to dyeing with all types of colors.

8 Adding to the dye bath on all types of machines and all kinds of colors where increased penetration and uniformity of shade are otherwise difficult to accomplish.

9 A dispersing agent in the dissolving of dyestuffs in order to give complete solubility and full color value.

10 The preparation of grey cotton piece goods to be printed direct from the bale.

11 An admixture to a printer's paste to give thorough penetration, greater color value, and increased fastness to soaping, especially on cotton piece goods printed direct from the bale.

12 An admixture to vat color pastes where the process calls for pigment dyeing with subsequent reduction in the fibre or fabric.

13 De-oiling, or so-called "de-gumming", of raw stock cotton that has been dyed in the presence of sulphonated vegetable or animal oils which usually interferes with the spinning qualities. This is done in the final bath after rinsing.

14 The treatment of cotton piece goods prior to shrunk finishing.

15 The treatment of cotton piece goods and the addition to starch pastes on absorbent finishes.

16 The treatment of water prior to the addition of dry starch. This insures absence of lumps, complete wetting and complete solubility on boiling.

17 Use either with or without soap in the after-soaping of cotton yarns and fabrics.

18 In "brown scouring" for obtaining better penetration of the acid and greater solubility of calcium and magnesium salts.

19 The oxidation of vat prints, for preventing over-oxidation in the Bichromate or Perborate baths, for increasing the efficiency of oxidation and for overcoming any harsh feel that may be left by Bichromate.

20 The desizing of Rayon or Acetate piece goods.

Deceresol Wetting Agents can be used in hard water as they form soluble calcium and magnesium salts.

For neutral or slightly acid and alkaline solutions, use Deceresol OT; for strongly acid or alkaline solutions, Deceresol OS is recommended.

Write to nearest district office for further information.

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